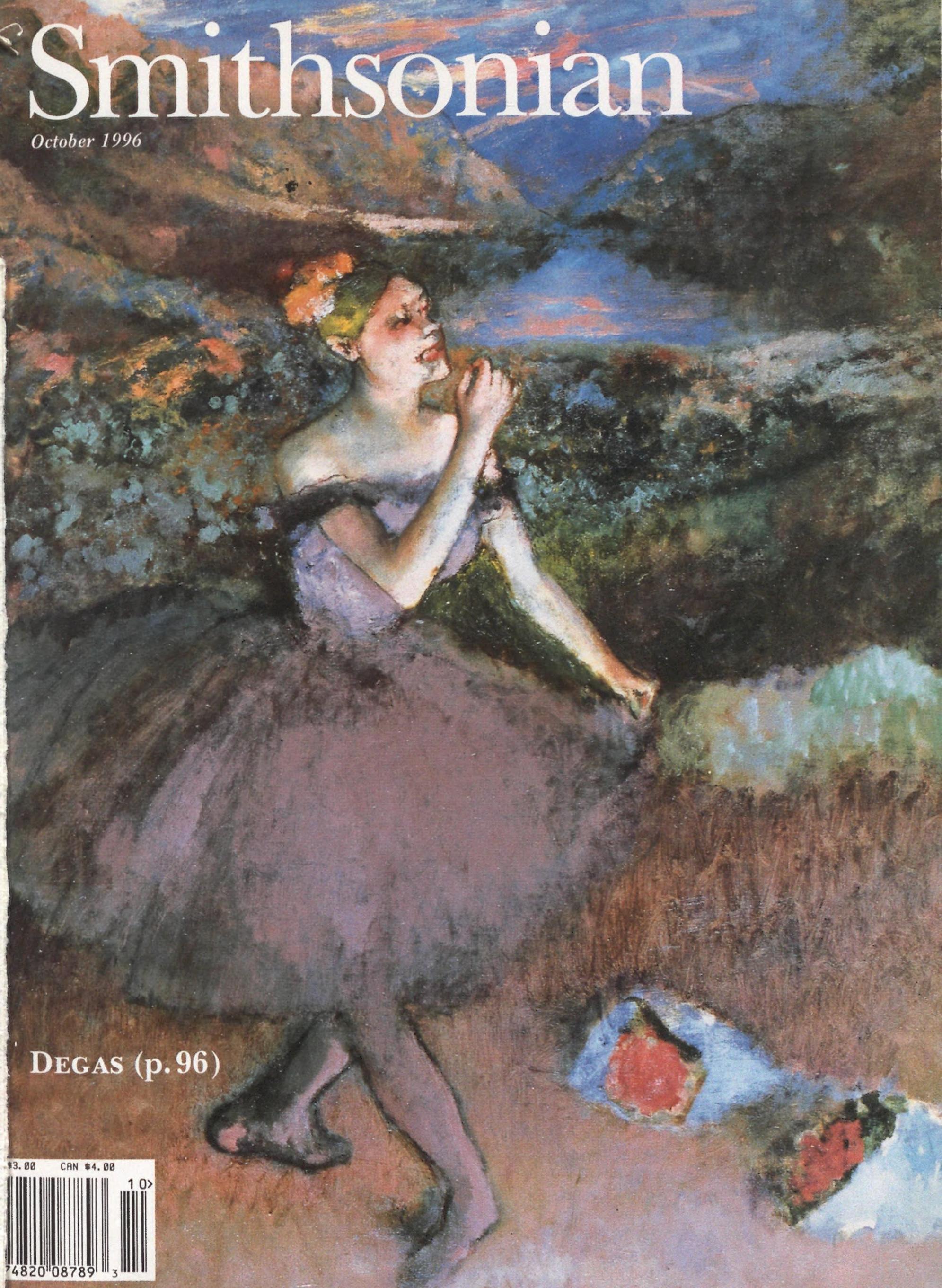
Smithsonian

October 1996



DEGAS (p. 96)

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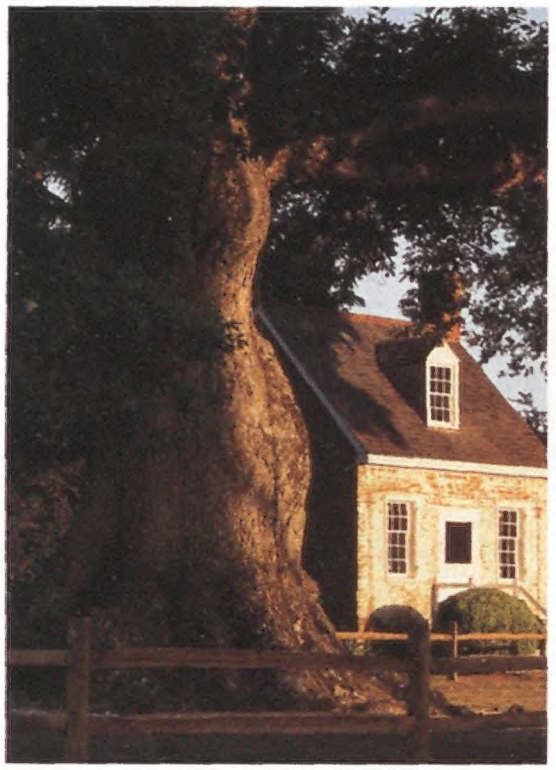
Smithsonian *features*

October 1996
Volume 27, Number 7



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Raphael Bravo, Irving, Texas.

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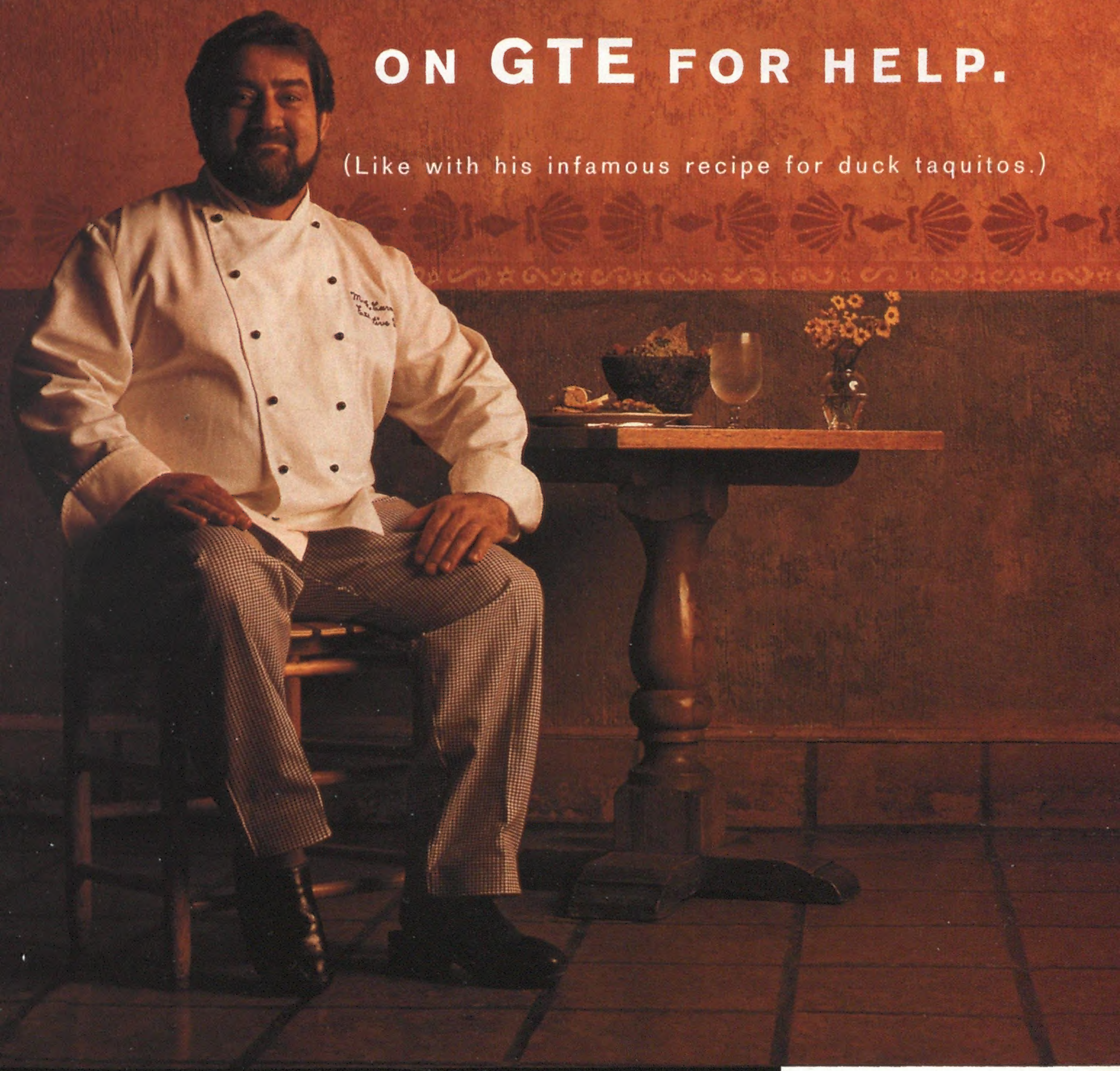

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October 1996
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A ballerina takes her curtain call in *Dancer with bouquets* (c. 1890-95). This is one of the last works, observes art historian Richard Kendall, in which Edgar Degas portrayed a dancer "engaging with her audience" (p. 96)
Chrysler Museum of Art, Norfolk, Virginia

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While women taking Prempro can experience menstrual-like bleeding, research has shown that many women who stay on Prempro stop bleeding within 1 year of use. Your doctor or health care provider can tell you more about the bleeding patterns you might expect with this type of medication.

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The same standards of quality also apply to the production of medroxyprogesterone acetate, the progestin in Prempro.

SIDE EFFECTS OF HORMONES SHOULD BE CONSIDERED. If you have not had a hysterectomy, estrogen alone can increase the risk of cancer of the uterus. The addition of progestin, however, may reduce this risk. That is why many doctors and health care providers now prescribe progestin in conjunction with estrogen for their patients. Progestins may have unfavorable effects on blood sugars, which might make a diabetic condition worse. The most common side effects are breast tenderness, headache, and abdominal pain.

Actual size Prempro 0.625 mg/2.5 mg

When you speak to your doctor or health care provider about hormone replacement therapy, be sure to discuss your personal and family history of breast cancer, breast lumps, abnormal vaginal bleeding, abnormal blood clotting, severe headache, dizziness, or liver disease. Women who are pregnant should not take hormone replacement therapy because of possible risk to the fetus.

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PREMPRO™

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Please be sure to read the important information on the following page.

BRIEF SUMMARY OF PRESCRIBING INFORMATION FOR THE PATIENT

PREMPRO™ Brand of conjugated estrogens/medroxyprogesterone acetate tablets.
This summary describes when and how to use estrogen/progestin drugs and the benefits and risks of treatment.

ESTROGENS INCREASE THE RISK OF CANCER OF THE UTERUS IN WOMEN WHO HAVE HAD THEIR MENOPAUSE ("CHANGE OF LIFE"). ***THIS FINDING REFERS TO ESTROGENS GIVEN WITHOUT PROGESTIN.***
Progestin drugs taken with estrogen-containing drugs significantly reduce but do not eliminate this risk. If you use any estrogen-containing drug, it is important to visit your doctor regularly and report any unusual vaginal bleeding right away. Vaginal bleeding after menopause may be a warning sign of uterine cancer. Your doctor should evaluate any unusual vaginal bleeding to find out the cause.

ESTROGENS/PROGESTINS SHOULD NOT BE USED DURING PREGNANCY.
Estrogens do not prevent miscarriage (spontaneous abortion) and are not needed in the days following childbirth. If you take estrogens during pregnancy your unborn child has a greater than usual chance of having birth defects. These birth defects may affect the baby's urinary system and sex organs.

ESTROGEN/PROGESTIN DRUGS

PREMPRO is a combination of two hormones, an estrogen and a progestin. This hormone combination has been shown to provide the benefits of estrogen replacement therapy while lowering the frequency of a possible precancerous condition of the uterine lining. This therapy is not intended for women who have had a hysterectomy (surgical removal of the uterus).

Estrogens have several important uses but also some risks. You must decide, with your doctor, whether the risks of estrogens are acceptable when weighed against their benefits. Check with your doctor to make sure you are using the lowest possible effective dose.

With PREMPRO therapy several menstrual-like bleeding patterns may occur. These may range from absence of bleeding to irregular bleeding. If bleeding occurs, it is frequently light spotting or moderate menstrual-like bleeding, but it may be heavy. Please discuss your bleeding pattern and set up an appropriate schedule for follow-up care with your physician.

USES OF ESTROGEN

To reduce menopausal symptoms. Estrogens are hormones produced by the ovaries of normal women. The decrease in the amount of estrogen that occurs in all women, usually between the ages of 45 and 55, causes menopause. Sometimes the ovaries are removed during an operation causing "surgical menopause." When the amount of estrogen begins to decrease, some women develop very uncomfortable symptoms, such as feelings of warmth in the face, neck, and chest, or sudden intense episodes of heat and sweating ("hot flashes" or "hot flushes"). Using estrogen drugs can help the body adjust to lower estrogen levels and reduce these symptoms. Some women have none or only mild menopausal symptoms; in others, symptoms can be severe. These symptoms may last only a few months or longer. Taking PREMPRO can alleviate these symptoms. If you are not taking hormones for other reasons, such as the prevention of osteoporosis, you should take PREMPRO only as long as you need it for relief from your menopausal symptoms.

To prevent brittle bones. After age 40, and especially after menopause, some women develop osteoporosis. This is a thinning of the bones that makes them weaker and more likely to break, often leading to fractures of spine, hip, and wrist bones. Taking estrogens after the menopause slows down bone loss and may prevent bones from breaking. Eating foods that are high in calcium (such as dairy products) or taking calcium supplements (1000 to 1500 milligrams per day) and certain types of exercise may also help prevent osteoporosis. Since estrogen use is associated with some risks, its use in the prevention of osteoporosis should be limited to women who appear susceptible to this condition. The following characteristics are often present in women who are likely to develop osteoporosis: white or Asian race, thinness, cigarette smoking, family history, and early or surgical menopause.

To treat vulvar and vaginal atrophy (itching, burning, dryness in or around the vagina, difficulty or burning on urination) associated with menopause.

WHEN ESTROGENS SHOULD NOT BE USED

During pregnancy (see Boxed Warning). If you think you may be pregnant, do not use any form of estrogen-containing drug. Using estrogens while you are pregnant may cause your unborn child to have birth defects. Estrogens do not prevent miscarriage.

If you have unusual vaginal bleeding which has not been evaluated by your doctor (see Boxed Warning). Unusual vaginal bleeding can be a warning sign of cancer of the uterus, especially if it happens after menopause. Your doctor must find out the cause of the bleeding so that he or she can recommend the proper treatment. Taking estrogens without visiting your doctor can cause you serious harm if your vaginal bleeding is caused by cancer of the uterus.

If you have had cancer. Since estrogens increase the risk of certain types of cancer, you should not use estrogens if you have ever had cancer of the breast or uterus.

If you have any circulation problems. Estrogen drugs should not be used except in unusually special situations in which your doctor decides that you need estrogen therapy so much that the risks are acceptable. Women with abnormal blood clotting conditions should avoid estrogen use (see **RISKS OF ESTROGENS AND/OR PROGESTINS**).

When they do not work. During menopause, some women develop nervous symptoms or depression. Estrogens do not relieve these symptoms. You may have heard that taking estrogens for years after menopause will keep your skin soft and supple and keep you feeling young. There is no evidence for these claims and such long-term estrogen use may have serious risks.

After childbirth or when breast-feeding a baby. Estrogen should not be used to try to stop the breast from filling with milk after a baby is born. Such treatment may increase the risk of developing blood clots (see **RISKS OF ESTROGENS AND/OR PROGESTINS**).

If you are breast-feeding, you should avoid using any drugs because many drugs pass through to the baby in the milk. While nursing a baby, you should take drugs only on the advice of your health care provider.

RISKS OF ESTROGENS AND/OR PROGESTINS

Cancer of the uterus. The risk of cancer of the uterus increases when estrogens are used alone, the longer they are used, and when larger doses are taken. There is a higher risk of cancer of the uterus if you are overweight, diabetic, or have high blood pressure.

The hormone combination you will be taking contains estrogen and progestin. This combination has been shown to provide the benefits of estrogen replacement therapy while reducing the risk of a precancerous condition of the uterine lining.

Additional risks may be associated with the inclusion of a progestin in estrogen treatment. The possible risks include unfavorable effects on blood fats and sugars. Usually, the smaller the dose and the shorter the duration of treatment, the more these effects are minimized. Check with your doctor to make sure you are using the lowest effective dose and only for as long as you need it.

Cancer of the breast. Most studies have not shown a higher risk of breast cancer in women who have ever used estrogens. However, some studies have reported that breast cancer developed more often (up to twice the usual rate) in women who used estrogens for long periods of time (especially more than 10 years), or who used high doses for shorter time periods. The effects of added progestin on the risk of breast cancer are unknown. Some studies have reported a somewhat increased risk, even higher than the possible risk associated with estrogens alone. Others have not. Regular breast examinations by a health professional and monthly self-examination are recommended for all women.

Gallbladder disease. Women who use estrogens after menopause are more likely to develop gallbladder disease needing surgery than women who do not use estrogens.

Inflammation of the Pancreas. Women with high triglyceride levels may have an increased risk of developing inflammation of the pancreas.

Abnormal blood clotting. Taking estrogens may increase the risk of blood clots. These clots can cause a stroke, a heart attack, or a pulmonary embolus, any of which may cause death or serious long-term disability.

Excess calcium in the blood. Taking estrogens may lead to severe hypercalcemia in women with breast and/or bone cancer.

During pregnancy. There is an increased risk of birth defects in children whose mothers take this drug during the first four months of pregnancy. Several reports suggest an association between mothers who take these drugs in the first trimester of pregnancy and genital abnormalities in male and female babies. The risk to the male baby is the possibility of being born with a condition in which the opening of the penis is on the underside rather than the tip of the penis (hypospadias). Hypospadias occurs in about 5 to 8 per 1,000 male births and is about doubled with exposure to these drugs. There is not enough information to quantify the risk to exposed female fetuses. However, enlargement of the clitoris and fusion of the labia may occur, although rarely.

Therefore, since drugs of this type may induce mild masculinization of the external genitalia of the female fetus, as well as hypospadias in the male fetus, it is wise to avoid using the drug during the first trimester of pregnancy. These drugs have been used as a test for pregnancy, but such use is no longer considered safe because of possible damage to a developing baby. Also, more rapid methods for testing for pregnancy are now available. If you take PREMPRO and later find you were pregnant when you took it, be sure to discuss this with your doctor as soon as possible.

SIDE EFFECTS WITH ESTROGENS AND/OR PROGESTINS

In addition to the risks listed above, the following side effects have been reported with estrogen and/or progestin use:

- Nausea, vomiting; pain, cramps, swelling, or tenderness in the abdomen
- Yellowing of the skin and/or whites of the eyes
- Breast tenderness or enlargement
- Enlargement of benign tumors of the uterus
- Irregular bleeding or spotting
- Change in amount of cervical secretion
- Vaginal yeast infections
- Retention of excess fluid. This may make some conditions worsen, such as asthma, epilepsy, migraine, heart disease, or kidney disease
- A spotty darkening of the skin, particularly on the face; reddening of the skin; skin rashes
- Worsening of porphyria
- Headache, migraines, dizziness, faintness, or changes in vision (including intolerance to contact lenses)
- Mental depression
- Involuntary muscle spasms
- Hair loss or abnormal hairiness
- Increase or decrease in weight
- Changes in sex drive
- Possible changes in blood sugar

REDUCING THE RISKS OF ESTROGEN/PROGESTIN USE

If you decide to take an estrogen/progestin combination, you can reduce your risks by carefully monitoring your treatment.

See your doctor regularly. While you are taking PREMPRO, it is important to visit your doctor at least once a year for a checkup. If you develop vaginal bleeding while taking estrogens, you may need further evaluation. If members of your family have had breast cancer or if you have ever had breast lumps or an abnormal mammogram (breast X ray), you may need to have more frequent breast examinations.

Reassess your need for treatment. You and your doctor should reevaluate your need for estrogens at least every six months.

Be alert for signs of trouble. Report these or any other unusual symptoms to your doctor immediately:

- Abnormal bleeding from the vagina
- Pains in the calves or chest, a sudden shortness of breath, or coughing blood
- Severe headache or vomiting, dizziness, faintness, or changes in vision or speech, weakness or numbness of arm or leg
- Breast lumps
- Yellowing of the skin and/or whites of the eyes
- Pain, swelling, or tenderness in the abdomen

OTHER INFORMATION

Estrogens increase the risk of developing a condition (endometrial hyperplasia) that may lead to cancer of the lining of the uterus. Taking progestins, another hormonal drug, with estrogens lowers the risk of developing this condition.

You should know, however, that taking estrogens *with* progestins may have unhealthy effects on blood sugar, which might make a diabetic condition worse.

Some research has shown that estrogens taken *without* progestins may protect women against developing heart disease. However, this is not certain. The protection shown may have been caused by the characteristics of the estrogen-treated women and not by the estrogen treatment itself. In general, treated women were slimmer, more physically active, and were less likely to have diabetes than the untreated women. These characteristics are known to protect against heart disease.

It is important to discuss, in detail, with your doctor or health care provider all the possible risks and benefits of long-term estrogen and progestin treatment as they affect you personally.

This Summary provides the most important information about PREMPRO. If you want to read more, ask your doctor or pharmacist to let you read the professional labeling.

This Brief Summary for Direct-to-Consumer Advertising is based on the current PREMPRO Tablets insert (PI 4665-1) issued November 15, 1995 with the incorporation, in lay language, of pertinent text from the Physician Insert, (CI 4664-1) issued November 17, 1995.

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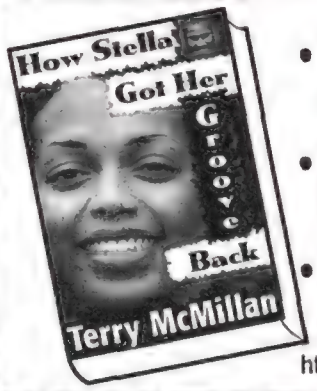

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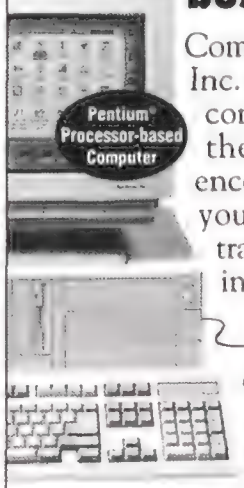

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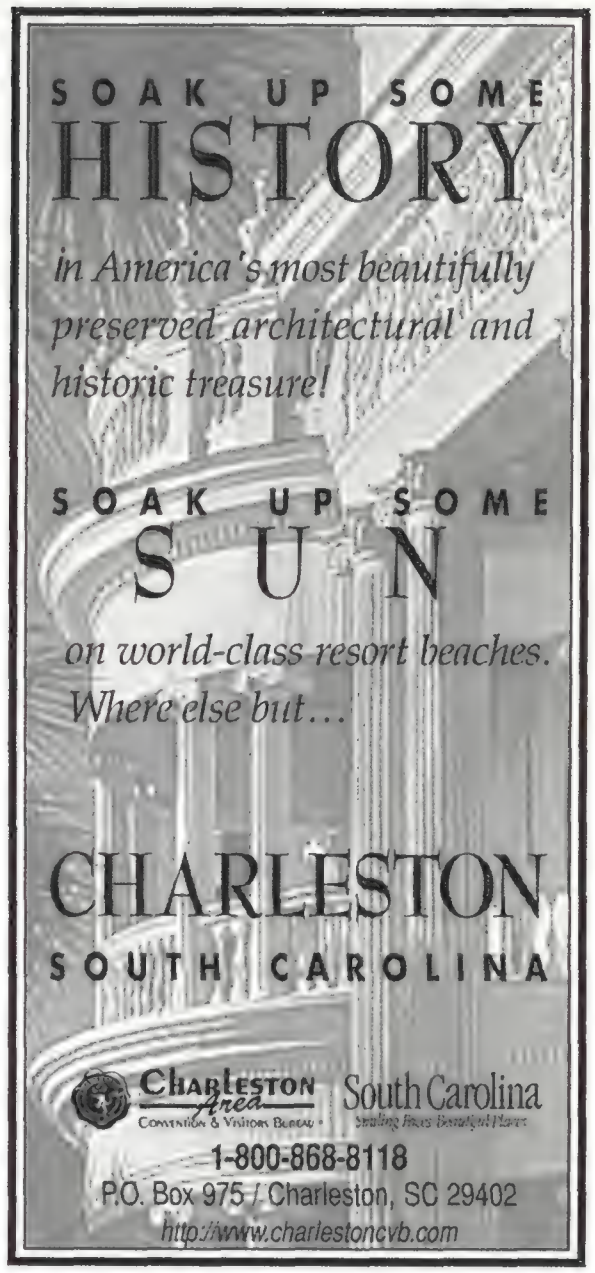

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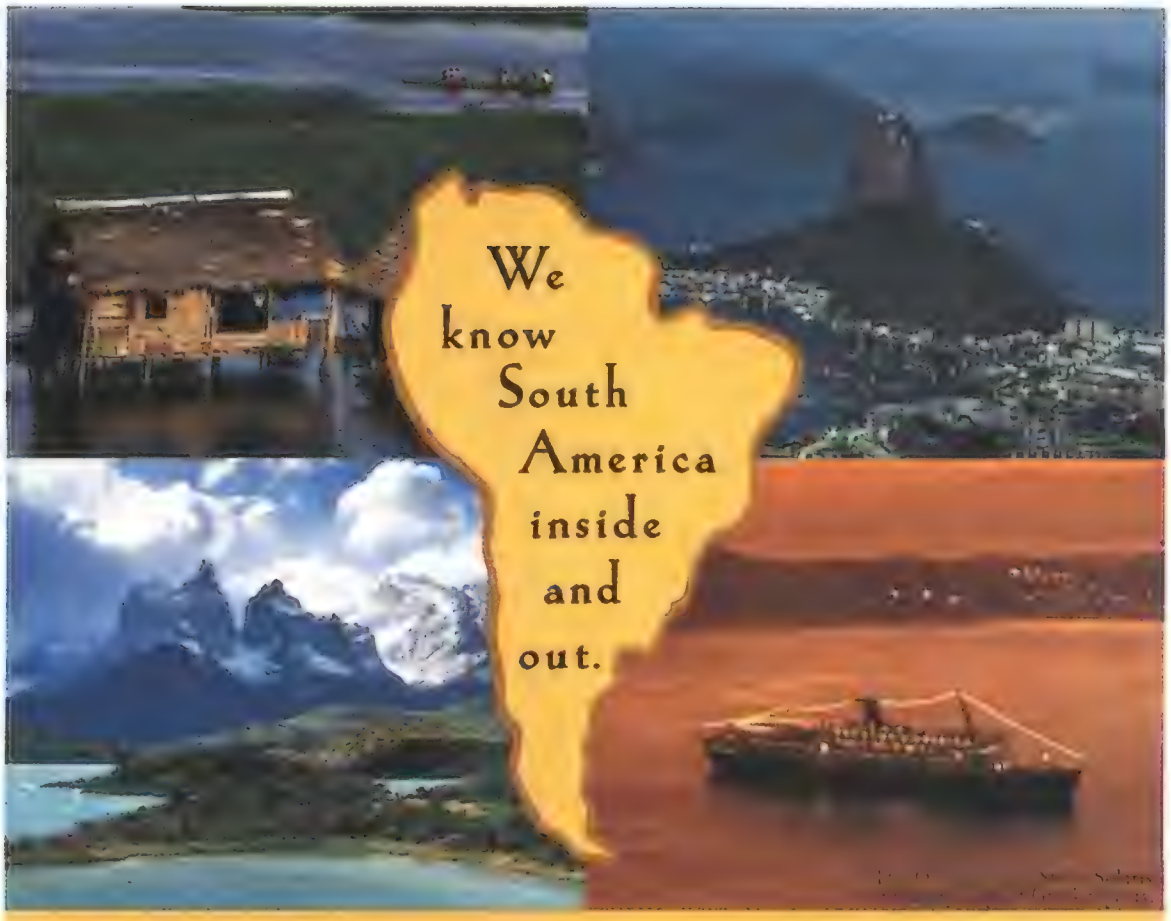

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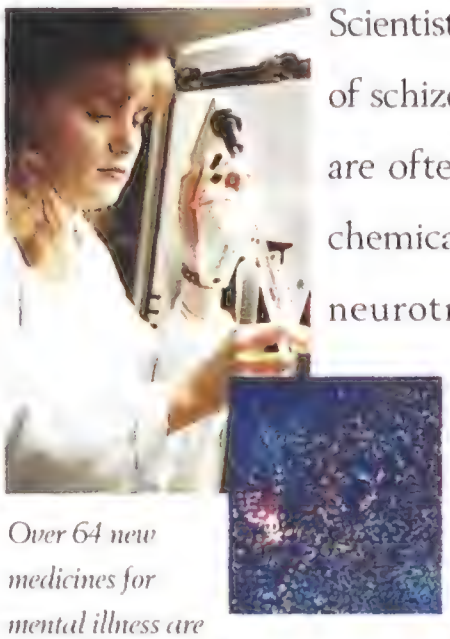
A CHEMICAL THAT TRIGGERS MENTAL ILLNESS IS NOW BEING USED TO STOP IT.

Drugs that act on this chemical in the brain are used to treat schizophrenia and psychosis.



Over 64 new medicines for mental illness are now in development.

Scientists now know the causes of schizophrenia and psychosis are often rooted in powerful chemicals in the brain called neurotransmitters. One of these neurotransmitters is dopamine. Schizophrenia and psychosis can result when the brain has abnormal dopamine levels. Because of recent advances, drugs that are able to alter dopamine levels free many patients from the terrible effects of mental illness. By developing vital drug treatments that alter various chemicals in the brain, pharmaceutical company researchers are offering real hope for the mentally ill.

Leading the way in the search for cures is what our 48,000 pharmaceutical company researchers do every day. For example, Dr. Paul A.J. Janssen discovered the first drug in a whole new class of antipsychotic medications. Thanks to these new medications, many people with acute psychosis can be treated effectively without the need for hospitalization.

staying healthy

Anxiousness, insomnia, a loss of appetite, deep mood swings, difficulty in completing tasks and suicidal thoughts can be symptoms of mental illness. An accurate diagnosis is critical, so see your doctor. For more information on mental illness, please call (800) 862-5110 for a free booklet, "New Hope For Depression and Other Mental Illnesses." Or visit us on the Internet at http://www.phrma.org

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Secretary Heyman's comments

Smithsonian Perspectives

150 1846–1996 Smithsonian

The Smithsonian is uniquely suited to run long-range research programs that monitor the state of the natural world

As the Smithsonian observes its 150th anniversary this year, I want to reflect on how science has benefited from the Institution's longevity. Armed with the farsighted mandate of its benefactor, James Smithson, the Institution continues to add to its physical collections and its written (now computerized) records of the state of the natural world, providing scientists with a baseline for measuring changes in the environment. By monitoring changes in the world's flora and fauna, and by examining or analyzing the causes, scientists can predict more reliably how long and to what degree these changes may continue.

Long-term monitoring of specific uninhabited natural sites allows Smithsonian scientists to measure ecosystem changes wrought by hurricanes or other natural events. Scientists from the National Museum of Natural History began running lines across a coral reef in Belize in early 1972 to record the kinds and number of organisms found at a set distance on either side of the lines. The project continues and now includes the reef's adjacent lagoon. Such a study furnishes valuable information on the health of the coral reef so that it can be managed to withstand increasing tourism.

Coral reefs have also been monitored for a long time in Panama, where the Smithsonian Tropical Research Institute (STRI) operates its marine laboratory at Galeta, just east of the Caribbean entrance to the canal. The laboratory is built over a reef that was covered by an oil spill in 1968 and again in 1986. STRI's fund of data about the reef's condition, gained by monitoring it for more than 30 years, was invaluable to the Department of the Interior's Mineral Management Service when it examined how corals, sea grasses and mangroves recovered from the spill.

In 1982, at its forest reserve on Barro Colorado Island, STRI launched a major effort to study the dynamics of an unstressed tropical forest ecosystem. In cooperation with scientists from Princeton and other universities, STRI inventoried 120 acres of forest. Of 330,000 trees recorded on this plot, 21 species are represented by a single tree. Such monitoring, updated every five years, records how often a canopy tree falls and which seedling species grow to fill the canopy gap. Many seedlings survive for decades with little growth, waiting for direct sunlight to reach them. By establishing similar plots elsewhere in the tropics, Smithsonian scientists can compare the growth and composition dynamics between Old and New World tropical forests. There are 12 such plots in 11 tropical countries. By understanding the dynamics, scientists and forest managers may be able to stimulate natural regeneration of tropical forests in areas where ill-advised settlement projects have failed and where the land is returning to forest.

The monitoring programs of the Smithsonian Environmental Research Center (SERC) have added valuable new insights into our understanding of the natural flux of gases between soil, vegetation and atmosphere. This research facility has recorded the acidity of every measurable rainfall since 1970. During the 1970s, rainfall became increasingly acid. By the 1980s, however, the average annual acidity of rain appeared to stabilize, gradually improving as cleaner fuel, smokestack scrubbers and other innovations reduced power plant emissions. Improvement is slow now because the advances of the 1980s have been partially offset by rapid increases in the volume of automobile fuel being burned. The impact of changing levels of acidity is manifold for terrestrial, avian and aquatic life, and their habitats.

At SERC, scientists have monitored the watershed of Muddy Creek since 1973, continually recording water discharge, sediment load and nutrient runoff. No other watershed in the country enjoys such a detailed record of runoff—data that will help researchers predict when the fish population of the adjacent Rhode River estuary and, by extension, the upper Chesapeake Bay might disappear. The increasing use of powerful nutrients on crops and lawns in the adjacent watershed fertilizes the water flowing off the land to such an extent that algal blooms choke the waterways. The decomposition of algal mats consumes so much oxygen that there is often not enough left for fish to breathe. Finally, SERC has monitored the carbon dioxide exchange of the center's spartina grass marsh, leading to an understanding of natural variation in carbon assimilation and release of carbon dioxide into the atmosphere, knowledge that is crucial in estimating greenhouse effects.

The importance of projects such as those described is immeasurable. Experience has shown that few, if any, other institutions are equipped to conduct them. Universities have attempted to do so, but projects are subject to the tenure of the academics who implement them. Projects sponsored by federal agencies are subject to the priorities of changing political administrations. The Smithsonian, however, has been relatively free of the effects of political transitions in its research, and by the nature of its governance as a trust instrumentality, it is ideally suited to carry out essential long-range research for the ultimate benefit of all humans.

I. Michael Heyman

Having transformed a plant into a giraffe, Amy was ready to stick her neck out in boxing aerobics.

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Letters to the Editor

Sunflowers

The article on sunflowers was most enjoyable, but the author left out the one warning—watch out for squirrels!

These little varmints completely demolished my sunflower bed of six plants. They hung on by their rear feet and ate voraciously until I was left with flower skeletons, and no kernels.
Mildred K. Blair
Altamonte Springs, Florida

The Smithsonian has its own special sunflowers. British architect Thomas Jeckyll designed a pair of gilded sunflower andirons (below) as one of many contributions to artist James McNeill Whistler's Peacock Room. This spectacular room is a popular destination for visitors to the Smithsonian's Freer Gallery of Art.
Peter G. Koltnow
Bethesda, Maryland

My son, Jesse, remarked that the patterns on sunflower seeds resemble bar codes. One day I hope to find out what numbers might come up when they are scanned . . .
Judith Taylor
Highland Park, Illinois

Gunks

I am in absolute awe of Al Diamond, who is shown on your August cover dangling precariously from the Shawangunk Mountains. I hope that you will forgive the observation, but he must be completely out of his mind. With my hopes that Mr. Diamond will never forget the existence of gravity, I wish him well in an activity that cowards like me would never attempt.
Jay A. Yanavok
Denville, New Jersey

I think you ill-serve the great majority of your SMITHSONIAN readers when you allot ten pages of your valuable space to the nonproductive and foolhardy activity of climbing a difficult rock.
William W. Wertz
Tyrone, Pennsylvania

David Roberts' reminiscence on climbing in the Shawangunks brought into sharp perspective my own 20 years of enjoyable climbing experiences at the Mohonk Preserve. The Gunks are one of the most special places in the world where we climbers enjoy our sport. This is due in part to the dedication and efforts of the preserve's talented and hardworking staff, but also, I believe, to the respect of climbers for that combination of rock, trees and sky that make the Gunks so incredibly satisfying to the soul.

Most climbers recognize the need to participate with the preserve's stewardship of the land. Climbers and their organizations such as the Access Fund and the American Alpine Club have worked very closely with the preserve to keep the area clean, build trails to avoid erosion and soil compaction, and educate newcomers (and the occasionally forgetful old-timer) about the preserve's mission and how climbers can help.
Stuart Pregnall
Annandale, Virginia

As the current chairman of the Mountaineering Committee of the New York-North Jersey Chapter of the Appalachian Mountain Club, I feel it is my duty to bring to your attention concerns regarding Dave Roberts' article. There has been a longstanding policy in the climbing community not to publicize the Gunks as an area to climb. This is because of the problem of overcrowding; the area has become a mob scene.

The real danger from an article such as this is that it will encourage the free spirits of today to go out and replicate the antics of their father or mother.

All I can say is that I hope the next issue of "Accidents in North American Mountaineering" will not contain the report of the death of a teenager trying to replicate Gargoyle by moonlight!
John T. (Jack) Reilly
Newburgh, New York

Cliffs are more than just giant playgrounds for egocentrics. Roberts seems unaware of recent scientific research revealing that cliff faces support some of the last refuges for old-growth forest in Eastern North America.

Cliff faces are home to a unique assemblage of organisms including lichens, ferns and vascular plants with Arctic affinities. Land managers and owners should look carefully at the impacts of climbing on their lands.
Peter Kelly
Cliff Ecology Research Group
University of Guelph
Guelph, Ontario, Canada
On the Gunks' cliffs, the damaging of plant life is forbidden. Ed.

Never before has one article given me such feelings of adventure, or such wonderful memories.
Dan Horndasch
Austin, Texas

As a fiftysomething climber of average ability, "High adventures in the Gunks" struck me as writing of the highest order. David Roberts transcended the chronicling of facts into a rhythm of history, personalities and technology. Roberts' despondent note on the growing popularity of climbing could be counterpointed with the endless possibilities of new Gunks just over the next hill—though the old established routes do remain like old friends, standing by for another visit to familiar holds.
Paul A. Swanson
San Diego, California

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As a member of the Mohonk Preserve's Land Stewardship Committee, I am aware of how the preserve is struggling to deal with problems of overuse in its climbing areas. SMITHSONIAN, by publishing this article, has exacerbated the problem. I would have expected you to take into account the adverse impact this article would have on the preserve. It will not only bring more visitors to this area, which is already suffering from the burden of too many people, but it will also attract individuals who are seeking excitement—but don't know what they are doing—to a sport that is inherently dangerous.
Keith LaBudde
President, Friends of the Shawangunks
Accord, New York

Time machine

The fossil stromatolite in your story is definitely not "algae" or "solidified algae." Rather, your Warrawoona stromatolite is a stony remnant of a once-thriving community of many kinds of bacteria including different food-making photosynthesizers, swimmers, sulfur breathers, hydrogen producers, survivors of both drying out and of boiling water. Mislabeling your gorgeous specimen is worse than the fact that you published it upside down and that you called me a bacteriologist. How would you appreciate an upside-down photograph of the ruins of the Empire State Building labeled "solidified jellyfish"?
Lynn Margulis
Distinguished University Professor
University of Massachusetts, Amherst

Warrawoona stromatolite, right side up.

Anna Deavere Smith said, ". . . I would like to have known some abolitionists, what their motivations were and what kind of people they were."

I would like to direct her to a female abolitionist who was very famous in her time, but is not largely known or remembered now. She was an incredible woman, an author, newspaper editor and owner, and a friend to Horace Greeley and Mary Todd Lincoln.

Her name is Jane Grey Swisshelm, and her autobiography would certainly give Anna Deavere Smith an insight into the life and mind of a female abolitionist who had all the fire, courage and zeal of John Brown but used her pen instead of the sword.
Jan M. Gacusana
St. Joseph, Minnesota

I was startled to read Shelby Foote's description of emancipation as "turning four million people loose with no jobs or trades or learning." His comment fails to acknowledge the skills and intelligence of the freed slaves. While many were unable to find employment in the post-Civil War United States, most possessed a depth of skills and trades that had previously made them instrumental to the economy of the South.

Surely those skills were not lost through the process of emancipation.
Dani Brune
Austin, Texas

Camp meetings

I don't know when I have enjoyed any magazine article as much as I enjoyed the one by Bonnie Angelo about camp meetings. How refreshing to read about people who love God, family and friends, and who are transmitting these values to their children. As a nation we are sadly lacking in providing these kinds of roots, tradition and continuity for our children.
Virginia Mauck
Tucson, Arizona

Sound bites

How could Robert Wernick in his article on sound bites have missed the greatest one of all time, allegedly uttered by my Habsburg ancestor, Marie Antoinette?

"Let them eat cake!"

The Habsburgs sent her from Vienna to Paris to marry King Louis XVI. Humorists say that a funny thing happened to them en route to absolute power. But her famous phrase, actually coined by plebeian propagandists in 1789 to destroy the monarchy, did that and more. It convinced France, and later much of the world, that the aristocracy was corrupt, unfit to govern and deserved to be liquidated.
Bruce H. Zeiser
Milford, New Hampshire

How about: "Sighted sub. Sank same" from a pilot, patrolling the East Coast in 1942, to his headquarters?
George E. Williams
Clinton, Indiana

It should be noted that General McAuliffe's laconic reply "Nuts!" was given on December 22, 1944, and not in 1945, as cited in Robert Wernick's interesting article. As another sound bite goes—close, but no cigar.
Jerold A. Nadel
Rensselaer, New York

If the British officer Maj. John Pitcairn shouted "Disperse, ye rebels" in Lexington, Massachusetts, he surely did so on the morning of April 19, 1775, when the battle was fought, rather than in 1776, as you reported.
William E. Murray, Jr.
Portola Valley, California

Literacy

As an elementary teacher and a student in a reading specialist credential program, I want to congratulate you and author Richard Wolkomir. This is one of the best articles I have read explaining the complexities of adult illiteracy. Thank you especially for stressing that illiteracy has little to do with lack of intelligence. Good job!
Barbara Robbins
Fall River Mills, California

It's heart-wrenching for me to realize how directly and absolutely illiteracy cripples the lives of those trapped under its weight. I was especially moved by the article's subject, Ken Adams. It appalls me that such a diligent, good-hearted American senior is living under such horrid conditions due largely to his inability to read. Mr. Adams possesses courage few humans do. Thank you for publishing such an inspiring, thought-provoking article.
Leigh A. Durig
Washington, D.C.

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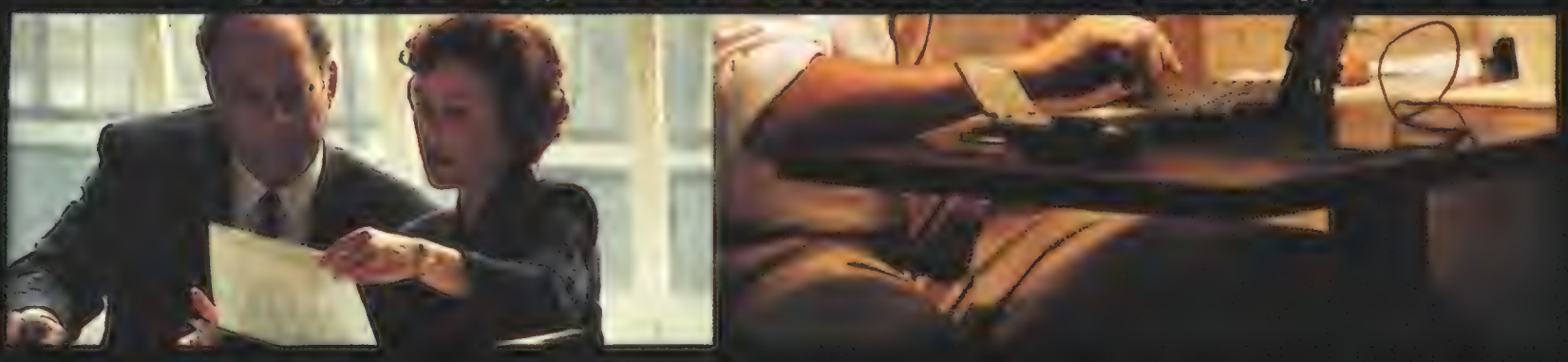

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Around the Mall and Beyond

By Michael Kernan

At the Young Collectors Tent, they're on the lookout—for even more antique ice skates, African dresses, chopstick rests, lunch boxes, magnets, cowboy hats, snow globes, fossils, . . .

Among the 60 kids invited to show their collections was Stefan Osdene, who has 3,000-plus appliances—fans, griddles, coffeepots, toasters, heaters, you name it.

The Young Collectors Tent at the grand Smithsonian 150th Birthday Party on the Mall hasn't even opened yet, but already the people are swarming in, friends and relatives and enthusiastic visitors, and everyone is talking at once, and the noise level is getting up to four jet engines.

"I've always liked mechanical stuff," shouts Stefan Osdene, "then I visited the Edison museum in Florida where I got a chance to see a lot of appliances. I said to myself, I have to collect these. I love 'em."

Stefan picks up a 1911 porcelain-based electric toaster. "This one's in the Smithsonian," he says with forgivable pride, "and they have several models of Thomas Edison fans, too."

His own Edison fan dates from 1898 and shows the mark of the master: massive and a bit klutzy, but it works. The hand-wound armature is the size of an ankle shackle, built to last centuries. Like everything else on the table, it is polished to look like new.

I wow over a 1910 Hamilton-Beach mixer, a 1925 marshmallow toaster and a Little Wonder Whisk Broom Vacuum Cleaner, vintage 1920, two feet long including the bag.

"I get pieces from collectors, museum auctions, and sometimes from flea markets," says Stefan, 15; he has a commanding presence and is so self-possessed that he has his own business card.

"How many do you have?" I ask, surveying the dozen or so spread out on the table.

"Oh, three to four thousand."

Thousand!

His father says the collection is in several rooms of their Richmond, Virginia, home. The family manages to accommodate it.

"We're codependents," he adds cheerfully.

This thing of collecting, I suddenly realize: it's all about numbers. Huge numbers. The sheer numberness of numbers. The Smithsonian's Office of Elementary and Secondary Education posted notices and distributed 100,000 applications to find young people who collect things, and then invited about 60 of them to be part of the birthday party. Collecting, of course, is the Smithsonian's thing, too. The tent will hold 40 tables, but so far only 25 have been installed.

It's plenty for me.

Outside, the party scene is heating up as crowds queue for Thai or Cajun or down-home food and stand before giant TV screens to watch the dedication of the 150th Anniversary Bell. At dozens of tents and stages up and down the Mall, hundreds of presenters and performers are here to celebrate the Smithsonian's wide-ranging interests.

Numbers. What would we do without them? Certainly we believe with utter, often naive, faith in statistics these days. We believe in them probably more than we believe in anything. A fourth-grade class of Bailey's Elementary School for the Arts and Sciences in Falls Church, Virginia, wanted to improve their sense of numbers and see what a million looked like.

"We thought we'd collect a million of something," says teacher Allyn Kurin. "We thought: Newspapers? Too big. Pennies? Too expensive. We brainstormed awhile, and finally we came up with paper dots from hole punchers." So the 20 pupils roamed the neighborhood. They raided offices and schools, and made dots with punches in their own homes. Eventually they found a machine that punched a hundred at a time.

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Erections lasting more than 6 hours (priapism) were reported in fewer than 1 of every 200 patients in clinical studies. This condition, although rare, requires immediate medical attention from your doctor or the closest emergency room because it can result in permanent damage to the tissue of the penis. To minimize the risk of priapism, CAVERJECT should be used at the lowest effective dose

2. Penile fibrosis
In clinical studies, the overall incidence of penile fibrosis (lumps or curving of the erect penis), including a condition called Peyronie's disease, was 3 of every 100 men who used CAVERJECT In one self-injection study where CAVERJECT was used for up to 18 months, penile fibrosis was reported in 7.8% of men

3. Patients on anticoagulants (blood thinners)
Anticoagulants such as warfarin or heparin can contribute to an increased risk of bleeding after injection. Thereafter, tell your health care provider if you are taking this type of medicine

4. Determination of the cause of impotence
Underlying treatable causes of impotence should be diagnosed and treated before starting treatment with CAVERJECT

5. Sexually transmitted or blood-borne diseases and injection-site bleeding
Use of CAVERJECT offers no protection from the spread of sexually transmitted diseases (STDs), including HIV infection. You should understand the protective measures necessary to guard against the spread of STDs. The injection of CAVERJECT can result in a small amount of bleeding at the site of injection, which could increase the risk of transmission of blood-borne diseases between patients infected with blood-borne diseases and their partners **Do not share or reuse needles or syringes.**

6. Patient information
Patient instructions for administration are included in each package of CAVERJECT. You should read and understand these instructions completely. Properly discard needles after use. Do not allow anyone else to use your medicine

7. Dose titration
To ensure safe and effective use of CAVERJECT, you should be thoroughly instructed and trained in the self-injection technique by your health care provider before beginning treatment at home. The desirable dose should be established during an office visit, and should not be changed without first consulting your health care provider. The instructions for preparation and self-injection of the CAVERJECT solution should be carefully followed.

8. Regular checkups
You should visit your health care provider regularly while on self-injection treatment with CAVERJECT. It is recommended that you visit the prescribing professionalis office every 3 months At that time, the safety and efficacy of therapy with CAVERJECT should be evaluated, and the dose adjusted, if needed.

Can I use CAVERJECT while taking other medications?
In clinical trials, use of medicines to treat high blood pressure, diabetes, arthritis, and fluid retention had no effect on the efficacy or safety of CAVERJECT. However, the health care provider who prescribes CAVERJECT for you should be aware of all medicines you are taking

What side effects might occur during use of CAVERJECT?
Before using CAVERJECT, talk with your doctor about possible side effects and what to do if side effects occur. The most common side effect reported in clinical studies was mild to moderate penile pain after injection. About one third of men reported this effect. Three percent of men discontinued treatment because of penile pain. Other side effects involving the penis and reported by 1% to 4% of patients included prolonged erection, penile fibrosis, injection site bruising, penis disorder (including numbness, infection, irritation, sensitivity, itching, and discoloration), penile rash, and penile swelling. Priapism (erection lasting over 6 hours) was rarely reported. Seek immediate medical attention if this occurs. Other side effects have also been reported with the use of CAVERJECT. Call your doctor if you notice any redness, lumps, swelling, tenderness, or curving of the erect penis.

What is a typical dose of CAVERJECT?
The correct dose of CAVERJECT for you must be determined by your health care provider during an office or clinic visit. Most men will use between 5 and 20 micrograms per dose; doses greater than 60 micrograms are not recommended. The dose of CAVERJECT that is selected for you during your office visit should not be changed without consulting your health care provider If you accidentally inject an overdose of CAVERJECT, you should call your health care provider immediately.

How fast will CAVERJECT work?
The correct dose properly injected should produce an erection in 5 to 20 minutes. The erection should last for about 1 hour.

How often can I use CAVERJECT?
Generally, CAVERJECT should be used no more than three times per week, with at least 24 hours between each use.

How should CAVERJECT be stored?
Unused packs of CAVERJECT may be stored at or below 77F (25C) for up to 3 months. Do not freeze. After mixing the solution for injection, CAVERJECT should be used immediately

CAUTION: Federal law prohibits dispensing without a prescription. You must see a doctor or authorized health care provider to receive a prescription

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"Well, it was the counting that was hard," Kurin says. "It went pretty slowly, one by one, up to about 200,000. Then we got the dots from the large hole-punching machine. They were stuck together in clumps, and we were forced to find a new method of counting. We determined that 16,000 dots weigh 79 grams exactly, so we started counting them by weight." Since starting the project in September 1995 the class now has well over a million paper dots. They are exhibited in a large pretzel jar and several small pickle jars.

One pupil, Anh Pham, 11, represents the class for the day. Mostly she stays busy keeping things from blowing away in the lovely cool breeze that sweeps through. Nervously, she eyes the visitors and their roving paws.

"Please don't take the lid off that jar!" she pleads.

It was boredom that inspired 10-year-old Gregory Lane of Lafayette Hill, Pennsylvania, to start collecting antique rulers. "My parents were always taking me to antique shops, and I got tired of waiting around." So, he now has all kinds of wood and brass rulers—for carpenters and architects and shoemakers and hat fitters. Folding rulers, and rulers with calipers and levels and sliding rods and bars.

"My oldest ruler, about 150 years old, is from Sweden," Greg tells me. "It has measurements based on the size of the king—a thumb, a hand, a cubit (the distance from elbow to fingertip), and his reach from nose to fingertip."

He goes on to tell me that he's expanding his collection to all kinds of linear measuring devices such as tape measures. "I'm really keen on getting a lumberjack's rule. You wrap it around the tree and it tells you how much lumber is inside. At least I think that's how it works." When I ask him how he hopes to find one, he explains that he has a Website, http://www.philaprintshop.com/greg.html. Oh.

Here is 10-year-old Shaun Plummer of Indian Head, Maryland, and his collection of plastic souvenirs from fast-food places. The table is absolutely crawling with them. How many? "I don't know," says Shaun. But his aunt, who is here with his mother and grandmother, says he must have nearly a thousand.

As you might expect, there are many proud relatives in the tent. They're the ones sitting on folding chairs behind the displays, smiling to beat the band.

One of Abeer Abdalla's treasures is an antique wedding veil from Saudi Arabia.

Shaun's mother props up a bright yellow Dick Tracy, three inches high, who has lost his footing. "Of course this isn't quite a thousand, she says. We have more at home."

By now the collections are stacked up two to a table. Charity Watkins, 10, from Dale City, Virginia, has put out a row of rocks with a sign pointing to the smallest. The sign reads: "These are rocks I started collecting three years ago. They're one of my favorite collections. The reason why I collect rocks is because they are all special to me in a certain way. I think that every rock has its own story."

Abeer Beshir Abdalla is 14 but looks much older in her elegant gown of green and gold. She collects jewelry and clothes from the Middle East, and her table is covered with silver filigree necklaces and bedouin daggers. Some pieces are incredibly delicate and are lacquered onto boxes. "My first thing was this rose water container," she says. "It was handed down by five generations of women to me. The bedouins sprinkle rose water down the aisle for the bride at a wedding."

I see some magnificent silver ankle bracelets and a belt of Arabian vermeil coins. I see an intricately decorated silver bottle of kohl eyeliner, which is made of dried rose petals and applied with a small silver pencil dipped in rose water. "The stories behind these things

are what interest me," says Abeer. "I like to imagine where they came from."

I find Meg Sandstrom, 10, of Alexandria, Virginia, red-haired and freckled, standing by her display board of Russian medals. Russians love medals, she tells me: they have them for sports teams and schools and cities and all kinds of accomplishments and places. They exchange them as gifts.

She has hers divided into sports (the Moscow Olympics are very big), aviation, politics (many Lenins, a few Gorbachevs and one Kerensky, if I remember my Russian alphabet), St. Petersburg, Moscow and other cities, Egyptian figures from museums and so on. How many?

"We counted close to 500," says her mother, Betsy Sandstrom, also with red hair and freckles. "I teach Russian, and when I go to Russia, Meg gives me her orders. We hope she'll visit there one of these days."

My head is beginning to spin. Here comes 8-year-old Larry Holmes of Suitland, Maryland, both hands full of dinosaurs, on the way to his table. There stands Dan Furnback of Point Pleasant, New Jersey, beside his 2,000 hockey cards, all neatly encased in glassine. His mother says he doesn't trade or sell them: he can't bear to give up even one.

Emily Anne Behles, 10, of Baltimore has Korean artifacts, dolls, books, juice cans, shoes, chopsticks. Gayatri Mani of Lanham, Maryland, has foreign money and coins, including some pre-British Indian coins, a 1780 Maria Theresa coin and two second-century B.C. coins. Also pencils, including a painfully bent pencil that is an ad for a chiropractor.

And there are Patrick Godfrey's small model cars and Matthew Johnson's large model cars and John Monius' replica John Deere tractors. And bonsai trees by Joshua and Noah Urban from Accokeek, Maryland, including a Japanese black pine, white serissa, Japanese hornbeam and rock cottoneaster, as well as fuchsia, wisteria and juniper. And Kate Johnson's trolls, and Melissa Fox's ceramic wall vases, and Brian Fox's lunch boxes, and Anna Gatsos' magnets and Julia Rausch's wooden ice skates that surely date back to Hans Brinker or beyond.

I tell you, there is more stuff here—sheer stuff—than you can shake a stick at. What? You say you collect sticks? How many do you have?

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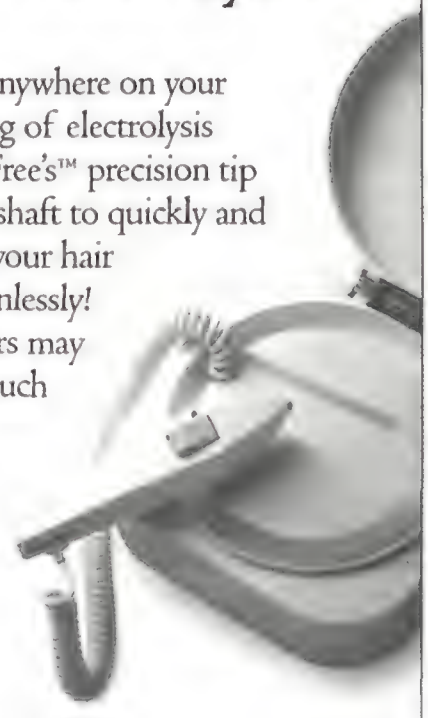

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The Object at Hand

By Adele Conover

It took four years, a shipwright and help from the British to create the blue whale model installed in the National Museum of Natural History. After 33 years, it still attracts millions annually

A visitor studies NMNH's four-ton blue whale model. The blue's pleated throat expands to hold tons of water—and thousands of krill—at a time.

For the past three decades 8,000 pounds of fiberglass has been "sounding" from the ceiling in the Life in the Sea Hall of the National Museum of Natural History (NMNH). It is the most stupendous proxy animal the museum has ever created. But at 92 feet in length and 34 feet in height, it no more than does justice to the dimensions of the huge creature it represents—the blue whale.

The blue is the largest animal that has ever lived. In real life some blues reach 100 feet, which makes them longer than an apatosaurus. Weighing in at some 150 tons, one blue whale is heavier than 25 full-grown African bush elephants. In death the creatures once provided meat for dogs and humans; oil for lighting, margarine and face cream; glycerin for munitions.

Even so, the great size and speed of blues (at up to 25 knots—or 29 miles per hour—they went faster than whaling ships could follow), plus the fact that they sank swiftly when killed at sea, protected them somewhat during the first four centuries of the whaling industry. Then, in the late 1860s, Svend Foyn perfected a highly effective harpoon cannon that featured an exploding head. Worldwide whale protection did not set in until almost a century later, and the years in between brought these giant mammals to near ruin. During the 1930-31 season, for instance, 29,410 blue whales were killed in the Antarctic. An estimated 350,000 blues have been killed in the 20th century.

The whales' great scarcity and sheer size have always posed considerable problems for museums wanting to display full-size specimens. As A. E. Parr of the American Museum of Natural History rather delicately pointed out in 1963, "Since whales do not perch, the problem of presenting them in their living form was a good deal more complicated than bird taxidermy."

That is why the huge creature that now awes visitors in the Sea Hall of the National Museum of Natural History—the second blue whale to be displayed there in this century—is not a stuffed whale. Or even a model made from measurements taken direct from a dead whale by NMNH scientists. The Smithsonian's first life-size museum whale, however, which the current whale replaced, *was* done from a dead whale. And a terrible fuss it turned out to be. To get it, Frederick True, then Smithsonian's curator of mammals, had to

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Men using flensing knives prepare to deflesh a blue in 1903. Unnatural distension of the lower jaws of dead blues misled model makers for decades.

dispatch a small team of taxidermists and paleontologists and numerous barrels of plaster of paris to a whaling station at Balaena, Newfoundland. That was in the spring of 1903.

They waited for weeks. When at last a dead whale, 78 feet long, was secured, it took weeks more of "greasy, laborious and puzzlin" work to make plaster molds of the whale and then cut away the flesh. The skeleton was saved for shipment to Washington. The skull alone weighed three tons. To make plaster casts, they had to manhandle flukes 17 feet across. Flippers tipped the scales at 800 pounds apiece. The whole mess, some 26,550 pounds of bone and mold, was shipped to Washington.

When it went on display in 1904, flanked by a life-size model of a tyrannosaurus that, by comparison, looked about the size of a black Lab retriever loping alongside, it was a wonder.

By the 1950s, though, a growing trend in museum chic called for the display of animals looking as active as possible in a facsimile of their natural habitat. Despite its anatomical correctness, critics said, the 1904 model, with its flippers outstretched like stubby wings, did look a bit like a sausage coasting along in a low flight pattern. A new, improved action whale was needed.

The new Smithsonian whale was to be modeled on the wooden-ribbed, plaster of paris whale then hanging in the British Museum. The British helpfully shipped to America 34 small templates made from their model. These were enlarged at NMNH to form a skeletal wooden whale around which the final model was molded. The Smithsonian's whale outgrew the British version by at least a foot—briefly becoming what a local journalist described as the "biggest whale in captivity."

Even without having to wrestle with a flesh-and-blood whale cadaver, the construction and mounting of the new Smithsonian whale was an extraordinary challenge—as well as a dangerous chore. Overseeing the work was the late A. Remington Kellogg, a brilliant, irascible vertebrate paleontologist and a stickler for detail. Smithsonian whale modeler Michael Friello remembers that the blowhole and other parts of the blue whale model had to be recast again and again. Kellogg often explained that he was hoping to retire as soon as the job was properly done. Admonishing the crew to hurry up, he would swear and say, "You'll keep me working forever."

Friello remembers that the eight-man crew of carpenters, a shipwright and plastics experts who built the whale, eventually hoisting it up to a midair position, clambered up and down the web of scaffolding more than 30 feet above the ground, without hard hats or safety belts, for four years.

A cabinetmaker, Friello was put in charge of cutting oval wooden frames—like those used to shape the fuselage of model airplanes—and laying longitudinal strips over them to create a skeleton for the whale's body. Two layers of thick fiberglass mat were applied over plywood nailed to the frames. Then Friello crawled inside the whale and tore out all of the supporting wood—to keep the model's weight down to a mere 8,000 pounds. As a last act, he and his mates painted their initials inside the whale's condo-size mouth.

In 1963, the same year that blue whales gained some measure of inter-

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national protection, Natural History's huge new proxy whale was finally installed where it is today, permanently arched in an arrested dive, seeming to plunge downward over the heads of awed visitors.

Despite A. Remington Kellogg's eye for detail, the spectacular model has not been free of controversy. Blues feed near the surface by opening their immense jaws (the top hinge pops up like the top of a silent butler) and engulfing thousands of gallons of water along with myriad small, shrimp-like crustaceans called krill. Mouth and throat are accordion pleated to be expandable, the better to take in more water and krill. With the throat fully expanded, a whale's front end is bulbous and swollen. As the next step in the feeding process, the whale closes a fine-meshed screen of baleen at the front of its mouth and expels all the water. The nourishing krill are conveniently caught by the baleen netting.

For centuries, whales were depicted as having bulging throats—based on blurry surface sitings and dead whales, whose throats were often distended either by gases caused by decomposition or by compressed air pumped in to help float them after they were harpooned. The blue whale diving down at NMNH visitors has just such a throat. For the first decade or so of its display life, this was regarded as a lifelike touch. But by the late 1970s, an increase in scuba diving and underwater photography began to provide new information about the look and behavior of blues in action. Among such was a fact that whale experts at NMNH find embarrassing: after feeding, blue whales usually spew out their extra water before they dive. A model of a blue that is both diving and bulbous with water, experts say, shows an improbable situation.

On the heels (or flukes) of that information came a few other cosmetic inaccuracies. Its skin is too smooth, critics complain. The epidermis of real whales shows the ravages of time, scars from shark bites, assorted cuts and scabs, whale lice and barnacles.

If critics have their way, by the turn of the 21st century yet another whale model, this time warts and all, will succeed the first two. Meanwhile, just as it is, the sheer size and bulk of A. Remington Kellogg's creature can still take the breath away and plunge the mind into the mysteries of the briny deep.

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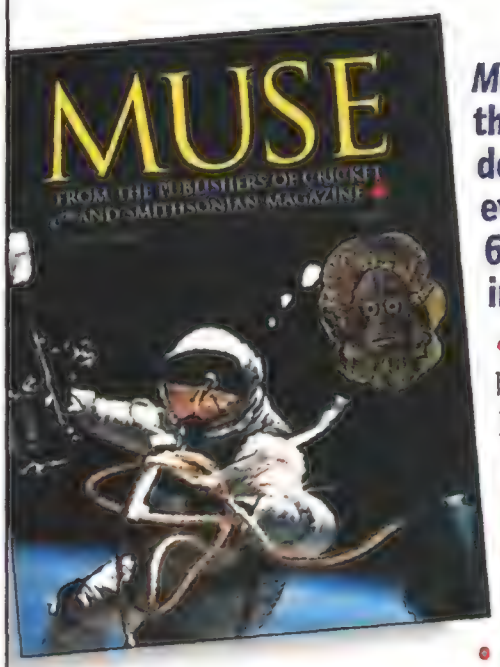

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Smithsonian Highlights

Plan a Smithsonian visit in 1996!

Join in the fun as the Smithsonian celebrates its 150th anniversary with a year of special exhibitions and events. *Receive a free Associates' planning packet.* Write Smithsonian Information, Smithsonian Institution, Washington, D.C. 20560, or call 202-357-2700 (voice) or 202-357-1729 (TTY), 9 A.M. - 5 P.M., Monday-Friday; 10 A.M. - 4 P.M., Saturday-Sunday. *Note:* Parking near the Smithsonian is limited. The Metrorail subway system, convenient to all museums, has parking available at some stations (details in packet).

Begin your visit at the Smithsonian Information Center's Associates' Reception Desk—open 9 A.M. - 4 P.M. daily—in the Castle.

Smithsonian museums are generally open 10 A.M. - 5:30 P.M. daily, except December 25. Hours at the National Zoo are 9 A.M. - 4:30 P.M. daily for buildings, and 8 A.M. - 6 P.M. for grounds.

Smithsonian Website

The Smithsonian home page on the World Wide Web (http://www.si.edu) offers on-line information about exhibitions, collections, events and products.

'America's Smithsonian'

St. Paul Civic Center, St. Paul, Minnesota (October 16-November 14) Centerpiece of the Institution's 150th anniversary celebration, the traveling exhibition continues its tour showcasing Smithsonian treasures. Note: Admission is free, but passes are required. Advance passes are available for a service fee of $3.50 each by calling 1-800-913-TOUR.

Special October Exhibits, Events

National Museum of American Art
The Art of Thomas Wilmer Dewing: Beauty Reconfigured (through October 14) Works by an important artist of the Gilded Age. See *Highlights Continued*, page 34.

Renwick Gallery
Calico and Chintz: Antique Quilts from the Patricia Smith Collection (through January 12, 1997) Richly patterned quilts date from the American Revolution.

National Air and Space Museum
The Violent Universe (through October 30) Exhibition on work of NASA's Compton Gamma Ray Observatory.

National Museum of Natural History
HoloGlobe (runs indefinitely) Presented with the National Science Foundation, a large-scale High-Definition Volumetric Display (HDVD) will give a unique view of our solar system.
Gems and Minerals Hall Gallery is closed for renovation until late 1997. The famous Hope Diamond is on view on the second floor of the Rotunda.

National Zoological Park
Think Tank Exhibit explores the biology and evolution of animal thinking.

National Museum of American History
From Smithson to Smithsonian: The Birth of an Institution (through January 5, 1997) Exhibition includes Smithson's own books and early photographs.

National Postal Museum (Located next to Union Station on Capitol Hill)
Artistic License: The Duck Stamp Story Permanent exhibit on the role of duck stamps in preserving waterfowl habitats.

Freer Gallery of Art
Choice Spirits (through spring 1997) Exhibition of works by American tonalist painters Thomas Wilmer Dewing and Dwight Tryon.

Arthur M. Sackler Gallery
Preserving Ancient Statues from Jordan (through April 6, 1997) Statues dating from 7000 B.C. from an ongoing excavation. See page 108.

National Museum of African Art
Memory: Luba Art and the Making of History (October 30-February 23, 1997) Artwork from the Luba Kingdom of central Africa.

Hirshhorn Museum & Sculpture Garden
Richard Lindner: Paintings and Watercolors, 1948-1977 (October 17-January 12, 1997) Retrospective features the bold and compelling images of the German-born American artist.

National Portrait Gallery
Red, Hot & Blue: A Salute to American Musicals (October 25-July 6, 1997) Exhibition organized jointly with the National Museum of American History spotlights the major personalities who created the American musical theater.

The Castle—Great Hall
Smithson's Gift New permanent display tells the story of the British scientist whose bequest founded the Smithsonian 150 years ago.

Arts and Industries Building
Stories of the People (through August 10, 1997) Exhibition presented by the National Museum of the American Indian features 200 artifacts from the museum's collection.

S. Dillon Ripley Center, Rotunda Gallery
Strong Hearts: Native American Visions and Voices (through January 5, 1997) More than 100 works by 25 Native American photographers.

Anacostia Museum
The museum will be closed for renovation for approximately ten months, starting October 1.

Heye Center, National Museum of the American Indian (New York City)
Woven by the Grandmothers: 19th-Century Navajo Textiles from the National Museum of the American Indian (October 6-January 8, 1997) Exhibition demonstrates the importance of weaving as an expression of Navajo life.
Reflections of the Weaver's World: The Gloria F. Ross Collection of Contemporary Navajo Weaving (October 6-January 8, 1997) Exhibition organized by the Denver Art Museum explores the artistry of modern weaving.

Cooper-Hewitt, National Design Museum (New York City)
Mixing Messages: Graphic Design in Contemporary Culture (through February 16, 1997) The museum's first-floor exhibition galleries have reopened after extensive renovation with a major show on U.S. graphic design, 1980-95.

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The timeless women of Thomas Wilmer Dewing

One of the most important artists of America's turn-of-the-century Gilded Age, Thomas Wilmer Dewing was best known for his elegant and often enigmatic depictions of women. Rendered in sparse, airless interiors and poetic landscapes, Dewing's artfully posed figures evoke a dreamlike sense of timelessness. At the height of his career, the artist's finely wrought compositions were admired and collected by such powerful patrons as Charles Lang Freer, John Gellatly and Stanford White.

"The Art of Thomas Wilmer Dewing: Beauty Reconfigured," on view at the National Museum of American Art through October 14, is the first comprehensive retrospective of Dewing's work. Organized by the Brooklyn Museum, the exhibition features more than 70 oil paintings, pastels, watercolors, silverpoint drawings and freestanding objects that trace his artistic development.

"For Dewing, the female represented an ideal form of beauty—the perfect artistic vehicle," says Dewing scholar Susan A. Hobbs, who cocurated the show with Barbara Dayer Gallati of the Brooklyn Museum. "It was a subject over which he reigned supreme."

Diane M. Bolz

Dewing cast a vibrant figure against a dark, velvety background to create the dramatic *Lady in Yellow* (1888).

Richly embellished surface of *The Spinet* (c. 1901-02) reinforces sensuous portrayal of artist Lucia Fuller.

An intent gaze and heavy shadows give *Portrait of a Lady Holding a Rose* (1912) a disconcerting modern look.

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By Steve Kemper

At the 'Mayo Clinic for animals,' the extraordinary is routine

New York's renowned veterinary hospital takes on almost anything, from a constricted boa to a mite-infested mouse to an anemic iguana

At the Animal Medical Center (AMC) in New York City, it's not unusual to see poodles attached to IV bags, iguanas dozing in post-op, cats getting CAT scans, exotic birds shaved for brain surgery, and assorted dogs of questionable character waiting in the emergency room with lacerations and gunshot wounds. "If you stick around here long enough," says Dr. Michael S. Garvey, vice chief of staff and chairman of the department of medicine, "you'll see just about every creature on the planet smaller than a cow."

The AMC fills a nine-story building in mid-Manhattan, near the East River. It is one of the largest veterinary hospitals in the world and almost certainly the busiest. Open 24 hours a day, the center treats more than 65,000 animals each year, ranging from the usual domestic pets to snakes, turtles and exotic birds, plus an occasional tiger or gorilla from the Bronx Zoo. Most of the animals come from New York City and the surrounding area, but the AMC's international reputation has led owners to fly in sick pets from France, Italy, Denmark and Russia, among other places. It conducts research programs with the Memorial Sloan-Kettering Cancer Center, Rockefeller University and the New York Hospital-Cornell Medical Center. The AMC's 70 vets and technicians have the training and technology to treat almost every problem they face, from glaucoma to lymphoma, from blown knees to bad teeth. All of which helps explain why the AMC is sometimes referred to as the "Mayo Clinic for animals."

The center's philosophy is that a pet is a member of the family and deserves commensurate medical attention. Pet owners evidently agree, sometimes paying thousands of dollars to put an artificial hip in Spot or to give Tabby chemotherapy.

In ophthalmology's surgery room, Dr. Alexandra van der Woerdt (p. 41) peers into a microscope trained on the eye of a fluffy and unconscious dog named Mushka, and carefully slits open the cornea and the lens. A 1-year-old bichon frise mix, Mushka has a large cataract. Earlier today van der Woerdt did an electroretinogram and ocular ultrasound to make sure the retina behind the cataract had not lost its function or become detached, which would have made cataract surgery pointless. Now she uses a tiny ultrasound probe to break up the cataractous lens and begins vacuuming all of it out. As the cataract disappears, the optic nerve comes into view, a pink sunrise at the bottom of the eye. Van der Woerdt reshapes the eyeball with surgical jelly, the same kind used in human cataract surgery. She enlarges the opening in the cornea and inserts an artificial lens.

A doctor rushes a dachshund that has eaten rat poison to the emergency room at the Animal Medical Center.

Photographs by Brad Trent

Then she sutures the eye. "We implant artificial lenses whenever we can," says van der Woerdt, who was drawn to the AMC from Holland; Europe has no animal hospitals of this size and sophistication. "Most dogs see right away. Mushka will go home tomorrow."

Down the hall in the main surgical area, staffers have sedated 6-year-old Beau, a golden retriever, and shaved his entire chest for a thoracotomy, a risky operation that few animal hospitals even attempt. The sac around Beau's heart, the pericardium, has filled with fluid, compressing the heartbeat. Removing the pericardium cures the condition about 75 percent of the time, but the cause might be a tumor, in which case the prognosis is death within two to six months. "We won't know which this is until we open the chest," says soft-tissue surgeon Dr. Heidi Hottinger.

With Beau belly-up on the operating table, Hottinger scalpels down his middle and cauterizes her way through tissue and fat, explaining everything to several residents and interns as she goes. The AMC is renowned as a teaching hospital, and many of the country's finest veterinary specialists have trained there. Hottinger cuts through the breastbone and ribs with an oscillating saw. "Don't drop down the whole length of the blade," she instructs, "because the heart is right underneath." She puts in the rib retractors and spreads the chest, revealing a throbbing pink cavern in which the lungs heave and the white tips of rib bones dot the walls. After a resident suctions blood and fluid, Hottinger begins working deep inside the chest with hands and forceps. She carefully isolates the crucial phrenic nerve from the pericardium, then enters the sac, releasing the fluid that has been compressing the heart. "The heart just went 'Ahhh!'" she says.

She lifts up a large piece of pericardium and examines it for tumors. "It's looking real happy for this dog," she finally says. "No tumors. With operations like this, where we know the owner is sitting by the phone, we like to call and say, 'Surgery's over. Good news.'"

An x-ray, EKG and surgery—for a mouse?

Nearby, a small x-ray machine in the dental department is about to be used on a mouse named Sylvia Orenstrat. Sylvia's problem, in the high-tech jargon used by AMC vets, is a growth known as a "butt mass." After the x-ray, staffers shave Sylvia for surgery and hook her up to an EKG to monitor her heartbeat. Her cage sits nearby, decorated with cutout pictures of mice.

"It's very difficult to operate on something this small," says resident Natalie Antinoff. "You can't put in a catheter. You can't put in a tube and breathe for the animal. The surgical area is very tiny. But the owner is wonderful. Some people say, 'It's a $2 mouse, forget it,' but she said to do whatever is best for her."

Dr. Michael Garvey wanders in to watch the mouse operation. "Half the population is trying to catch them and kill them," he says, "and the other half is bringing them in here. Sometimes they're doing both at once. Someone brought in their pet rat, which had eaten rat poison. We gave it an antidote. It turned out that the pet had gotten out and eaten poison intended for feral rats and mice."

At the table next door a doctor is castrating a young prairie dog—an unusual pet even in the exotic pet menagerie found in New York City. The animal's owner is worried that without the operation, it might get aggressive as it ages.

Meanwhile, Beau, the golden retriever, has been moved to the post-op area called "the beach," a pad on the floor beneath some heat lamps. The beach some-

Staff members examine a cat that fell four stories while the animal's distraught owner slumps on the floor.

times gets crowded and noisy with yelping, whimpering animals. Like humans, cats and dogs are often agitated and disoriented when emerging from anesthesia.

Beau's place in surgery is now occupied by a two-foot-long iguana named Fingers. Fingers is suffering from anemia, lead toxicity, muscle tremors, enlarged kidneys and gastrointestinal problems, all related to his goat-like habit of snacking on metal objects. He should be mostly green with some black and brown shading, but instead he is a sickly yellowish-orange."What's his diet?" asks Dan Stobie as he washes for surgery.

"Vegetables, nails and screws," says Dr. Antinoff. "He has free run of the house. We think there's a quarter in there, a screw and I don't know what else."

Stobie, who will soon leave the AMC to go into private practice, lifts out Finger's cecum, which passes for an appendix among iguanas, and rolls it around between his fingertips. "I can feel something round," he says. He cuts open the cecum, releasing a piquant reptilian bouquet, and proceeds to pick Finger's internal pocket of a quarter, a nickel and a penny. "Partial payment on the surgery." Stobie probes further and digs out a pebble. The one-inch screw that showed up so clearly on an x-ray four years ago has vanished, probably passed.

The clinic remains open 24 hours a day, and each year some 18,000 pets are brought in as emergencies.

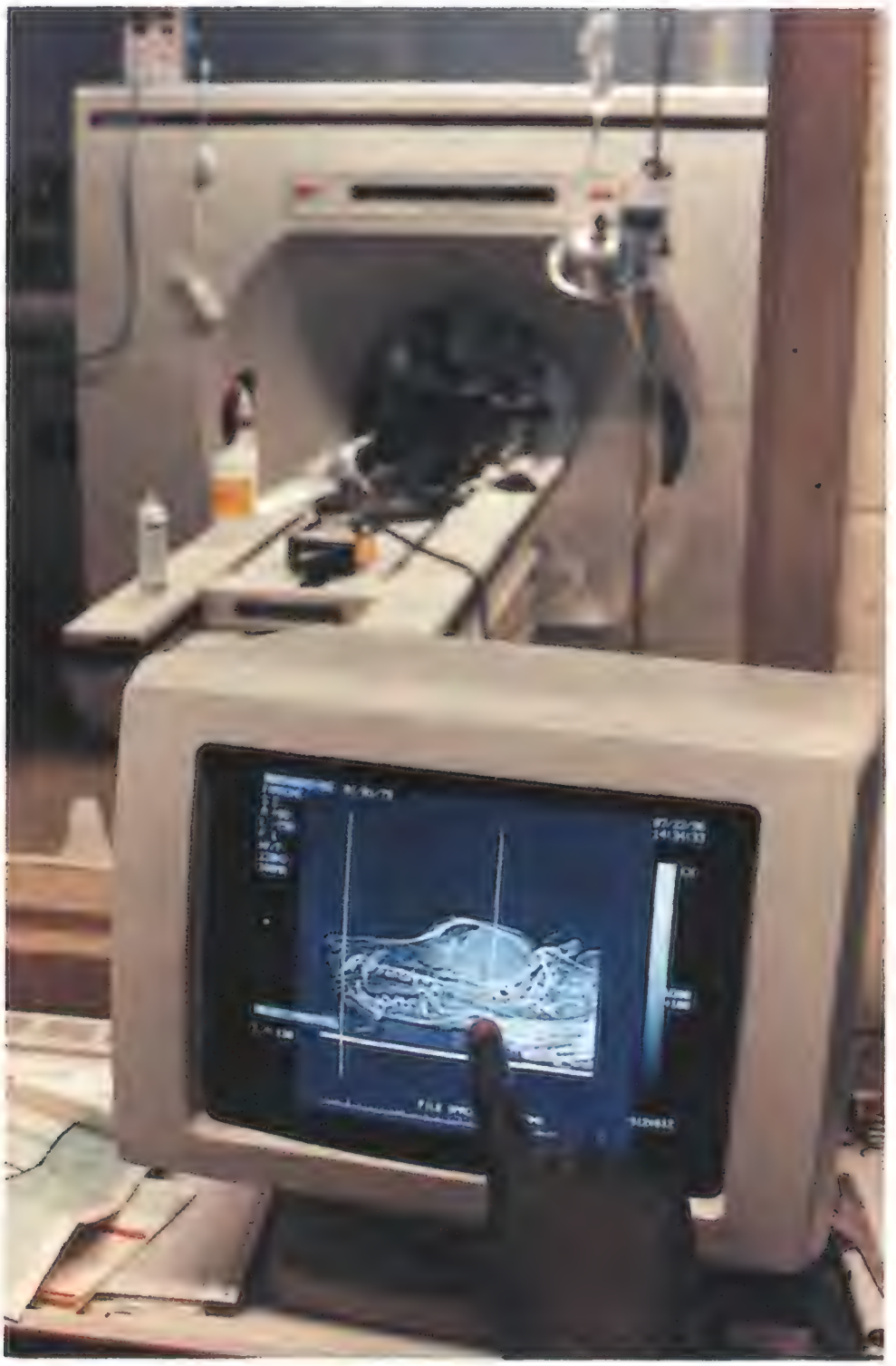
Iguanas, mice and prairie dogs probably weren't what Ellin Prince Speyer envisioned in 1910 when she founded the New York Women's League for Animals, the city's first free clinic for ill, injured and abused animals. (The hospital took its present name in 1959.) In the intervening years, the hospital has broadened its scope to include research and teaching, and no longer treats large farm animals. It remains private and nonprofit, but treatment isn't free anymore except in special cases. For instance, the AMC provides more than $150,000 worth of free care each year to Seeing Eye dogs. (Another big change is that vets once were overwhelmingly male; recently the balance has shifted, and now about two-thirds of graduating veterinarians are female.)

In Speyer's day, dogs and cats were apt to be considered laborers, not pets. Dogs guarded flocks and cats chased grain-eating mice. But as cities and suburbs gobbled up farmland in the years after World War I, the status of dogs and cats changed. They moved indoors, trading labor for leisure, and became pets, individuals, cherished members of the family. Nowadays Americans spend about $20 billion a year on pet care. Pets have their own department stores, summer camps, cemeteries and flavored mineral drinks. Presidential pets receive hundreds of letters a week and "write" books that become best-sellers. Laser surgery and corneal transplants are simply further signs of this profound shift in attitude toward domestic animals.

Secondhand technology permits first-rate care

Small-animal medicine boomed partly because the public demanded it. "People got tired of hearing about successful treatment for humans with cancer that they couldn't have for their dog," says Garvey. "When we started the oncology unit in 1971, people laughed at us, saying *nobody* would spend that much money on their pets, and now people come from all over the world. Secondly, as human medicine changes it pulls us along to develop similar capabilities. And the availability of secondhand technology makes that possible and affordable." Two years ago, for instance, the AMC bought a used CAT scanner from a human hospital for $125,000; a new one costs $500,000 to $1million.

One major difference between human and animal medicine is that pet owners, not insurance companies, are the ones who foot the hospital bills. How much is the



Technician indicates where to aim CAT scanner on dog being moved through machine (rear) by a conveyer.

public willing to pay for high-tech pet care? That depends. Though the newest technology saves pets' lives, it is extremely expensive. The center's cobalt radiation unit, for example, cost $100,000, plus another $600,000 for the radiation room.

It will take a lot of surgery to pay for all of that, and last year some senior staff members complained to the board that the administration had begun to neglect two of the AMC's other missions—research and teaching—because they don't contribute to the bottom line. As a result, they said, the center was losing its reputation as a stellar research hospital. Staff unease was exacerbated earlier this year by a sensational exposé in a New York tabloid that took the institution to task for its high fees and hard-nosed collection policies. Recently, the board appointed a new chief of staff, Dr. Guy Pidgeon, who faces the complicated job of balancing the clinic's medical missions and budget.

Money accounts for two of the most uncomfortable situations AMC doctors face: when an owner doesn't want to spend money on an animal that can be treated, and when an owner insists on continuing treatment of an animal that's beyond hope. The staff is reluctant to prolong an animal's life in a miserable state simply because it's medically possible. But as in human medicine, possibilities for rehabilitation keep expanding. Garvey once felt, for example, that the most humane course for animals whose rear legs were paralyzed or amputated was euthanasia, but now many such dogs are able to get around quite handily using "canine carts" that support their hindquarters.

Doctors at the AMC routinely remove brain tumors, insert pacemakers and perform balloon valvuloplasties. Even bypass surgery or heart transplants may be possible someday, Garvey believes, if the public insists and if animal hospitals can afford the necessary equipment. The AMC has sent doctors to the University of California to learn how to use dialysis and perform kidney transplants on cats. By mid-1997, it will be one of only a couple of animal hospitals in the eastern half of the country doing these kidney transplants. "Kidney failure is probably the leading cause of death in older cats," says Garvey, "so there's a market for it. It's almost scary to think what a cat's life expectancy will be. When I was young, 8 was old for a cat. Now 18 is not unusual. Will we be seeing 24- or 25-year-old cats? I think so."

Still, pets do die, and owners often take it hard. But vet schools teach medicine, not psychology, and back in the early 1980s many of the doctors at the AMC didn't know what to do when a distraught owner became hysterical. Then the hospital hired a full-time social worker named Susan Cohen to help clients through their grief and to train the staff in the arts of sympathy and consolation. The following year Cohen started the country's first pet-loss support group, which still meets every

Dr. Alexandra van der Woerdt (center) performs eye surgery on a bichon frise mix. Microscopes magnify the site for the doctor and the assisting surgeon (right) while giving a student a close-up view of the action.

other Saturday for 2½ hours. Cohen estimates that she does 500 interviews with clients every year, plus another 250 consultations and phone calls. Sometimes she helps people make peace with the decision to put an animal to sleep; sometimes she helps them work through their guilt for not noticing cancerous lumps before it was too late; sometimes she just listens. When necessary, she unsnarls the lines of communication between an agitated owner and a busy doctor. She has no doubt that for many people, pets are family.

Many of her clients come to her from the AMC's oncology unit, which treats more than 6,000 animals every year. Today she stands near Irene Hecht as Dr. Ken Rassnick explains that Hecht's Seeing Eye dog, a 14-year-old black Lab named Nikki, probably has lymphoma. Nikki's file, as thick as the phone book of a small city, suggests the extent of both her recent ill-health and the AMC's charity. In addition to the cancer, Nikki has difficulty walking and has all but stopped eating. To an outsider she looks ready for euthanasia, but that's not Hecht's perspective.

Author Steve Kemper, who lives in Connecticut, says he has owned dogs most of his life but now his two sons are all the wildlife he can handle.

"On January 3 at 2:45, we will have been together for 13 years," she says. "My sense of humor gets me through most things and will get me through this, but right now I'm *freaked out.* When I go home tonight alone, I'll lose it. I know that. I can't put into words how much she means to me and how much she's done for me. To have 13 years of absolute devotion from another being . . ." She reaches over to stroke Nikki.

She lives alone with Nikki, so Cohen helps her decide how she will get home that night, whom she will call, how she will manage. The next afternoon, Cohen calls to guide her through the possibilities. If lymphoma is confirmed, Hecht wants to try chemotherapy. What if the chemo doesn't work or Nikki won't walk or eat? Is Hecht ready to consider letting go? No, not yet.

The diagnosis does turn out to be lymphoma, and Dr. Rassnick orders chemotherapy. Though the tumors shrink, Nikki still shows little interest in food or movement. Rassnick consults Dr. Richard Joseph, a staff neurologist familiar with Nikki's case, who has also used acupuncture on her spine and hind legs. They suggest to Hecht that perhaps Nikki is simply tired of living, but over the next couple of days Hecht pushes for more time, more therapy, perhaps some nourishment via IV. Rassnick explains that inserting an IV would require

Veterinarian Tim Bostley, assisted by Heidi Hoefer (left), attempts to resuscitate a boa constrictor by blowing into a tube inserted in its trachea, a rarely used, last-resort procedure to save dying snakes.

anesthesia; Nikki is too old and fragile for that, and too fragile for more chemotherapy. Several days after the diagnosis, Hecht gives permission to put Nikki down.

"I'm glad Susan told me I would hate all my choices, because I did," she says a few weeks later. "I don't know where I'd be if Susan wasn't around. Nikki was with me every second for 13 years, and in that way she was more important than if a person in my family died. People don't understand that. There's just no good way to lose a being that you love."

Most stories at the AMC don't have sad endings. Typically, animals get well and their owners go home happy. Conversation is the rule among the people at the AMC's waiting room. They commiserate about their pets' ills, wish each other luck, tell stories about their darlings, and then lean over to coo and speak in a high babyish voice to the creatures on their laps or at their feet. The waiting room is a melting pot of classes and races, and doctors say wealthy strangers occasionally pay the bills of people they've met there who can't afford the care their pets need.

The AMC is the only veterinary hospital in New York that stays open 24 hours a day. About 18,000 pets come in as emergencies every year—pets such as Apple, a Border collie who gulped down the remains of a devil's food cake, including the 12-inch carving knife imbedded in it. His x-ray made quite an impression. Surgery saved Apple. Emergency staff members are no longer surprised by bullet-laden pit bulls, the dogs of choice among New York's drug lords. One night two men came in with a curiously lumpy umbrella that they had seen someone throw out the window of a taxi. It contained a boa constrictor wrapped so tightly into the umbrella's metal spokes that doctors had to administer a sedative to uncoil it.

Tonight, Dr. Tina Kalkstein, an intern, is examining a dazed kitten with a bit of dried blood on its nose. A child dropped the cat four stories down a stairwell. Every summer the hospital sees well over a hundred cases of "high-rise syndrome"—cats that have jumped or fallen out of open windows. (Amazingly, one cat fell 46 stories with only minor damage—the record so far.) Kalkstein sees no signs of internal injuries in this kitty, so she treats it for shock and tells the owners she would like to keep it overnight, just in case.

Next she tends a Doberman pinscher named Rex with deep punctures in his hindquarters and a flapping wound in his side. "He cut himself on a pit bull," cracks Kalkstein. "We see something like this two or three times a day, and 90 percent of the time it's by a pit bull." She estimates that Rex's medical bill will come to about $1,100. As she cleans his wounds, interns on other tables are busy trying to save a mongrel dog hit by a bus and a chow hit by a car. Waiting in line are a cat with a urinary tract infection, a vomiting dog, a cat having an asthma attack and a dog having seizures. Meanwhile, another of the interns is on her way to a human hospital because a patient bit her hand. Night shift at the AMC.

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Dr. Rodney Ayl informs a couple their cat has died. Staff members try to help people deal with their grief.

"One of the best things about being an intern here is you get to see so much," says Kalkstein. "You're just thrown in, and at first you think, 'Oh my God! Where are my books?' Your learning curve is *vertical.*"

Interns see so much because the hospital can take on almost anything. If a dog or cat needs a blood transfusion, it comes from the AMC's own donor cats and dogs, which periodically contribute blood over several months and then get adopted, usually by members of the AMC staff. Animals suffering from intense asthma or heart failure get constant monitoring in the intensive care unit's oxygen cages.

The hospital also maintains its own pathology lab, which does about 8,000 diagnostic tests per month. "I don't know of any other pet hospital, outside of universities, that has a pathology department," says Dr. Arthur I. Hurvitz, the department chairman. "If a pathologist can go look at an animal, it speeds up the analysis. It can be done in 2 or 3 hours versus 24 hours. Having it all under one roof is critical."

In recent years exotic pets have become chic. Almost anything with four legs, wings or scales might show up at the hospital's avian and exotic pet service. About 60 percent of the unit's patients are birds; 20 percent are ferrets, guinea pigs and other rodents; and the other 20 percent are reptiles, the newest fad.

The exotics unit is staffed by two residents and three board-certified vets, including Dr. Karen Rosenthal. Her first patient today is an 11-year-old parakeet with a beak that has gotten so long, he's jabbing himself in the chest. She trims him with some ordinary nail clippers. A spur-thighed tortoise, as big as a platter, is next. "Uh-oh," says Rosenthal. "She's gasping, and for turtles and tortoises, that's a death sign." She peers down its throat with a penlight and probes beneath the shell with her finger. "It's pretty empty in there and she's dehydrated." Rosenthal tells the owner that she would like to keep the tortoise for a couple of days, put in an IV catheter, and do x-rays and blood work to get a diagnosis. The owner balks at the $500 estimate, so Rosenthal recommends antibiotics and force-feeding with a syringe at home, but warns: "The chances of us helping her are slim, and the chances are even slimmer if we just give her antibiotics." The owner opts for home treatment, so Rosenthal teaches her how to use the syringe.

Next stop is surgery, where another of Rosenthal's patients, a three-foot-long corn snake, is going under the knife for the second time. AMC doctors removed a large tumor in the spring, but it has grown back. The owner doesn't want to pay for surgery again, but Rosenthal has convinced him to donate the snake to the hospital. She wants to take out the new tumor and, if the cancer hasn't metastasized, to try radiation therapy, which has never been used on a snake before. To hold the snake still in the CAT scanner, she'll try putting it into PVC pipe. "Maybe we'll learn something that will help the next person's snake," she says. "We know a lot medically about dogs and cats—what doses to give, how they respond to various treatments. But with exotics, a lot of times we're just winging it."

Later that evening, Dr. Richard Joseph, the neurologist who does acupuncture, inserts eight needles into the hindquarters of a beagle named Charlie and six more into his upper neck. Though only 3, Charlie has calcified disks, a painful degenerative disorder that makes walking difficult. His previous vet tried cortisone, but Charlie relapsed when taken off the drug. Surgery was a questionable option because the condition existed in both his neck and his back and would have required operations at both sites. When Dr. Joseph suggested acupuncture, owner Jay Handlin was skeptical, but Joseph said it helps about 80 percent of the dogs with disk disease and avoids invasive surgery. Charlie has had six treatments now, at $70 a pop, and Handlin is delighted. "He's active. He's walking like himself. He's hopping up on the couch. He can throw his head back and howl again," Handlin grins. "He's gotten back to being a real pain, just the way a beagle should be."

Another animal restored to health, another happy pet owner. At the AMC, it happens thousands of times each month.

Jubilant dog-lover heads home after his Chihuahua, hit by a car, was treated for a broken leg and discharged.

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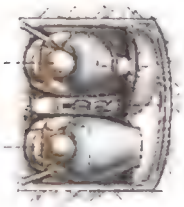
bags  to help protect and reassure. While available traction control and a standard An

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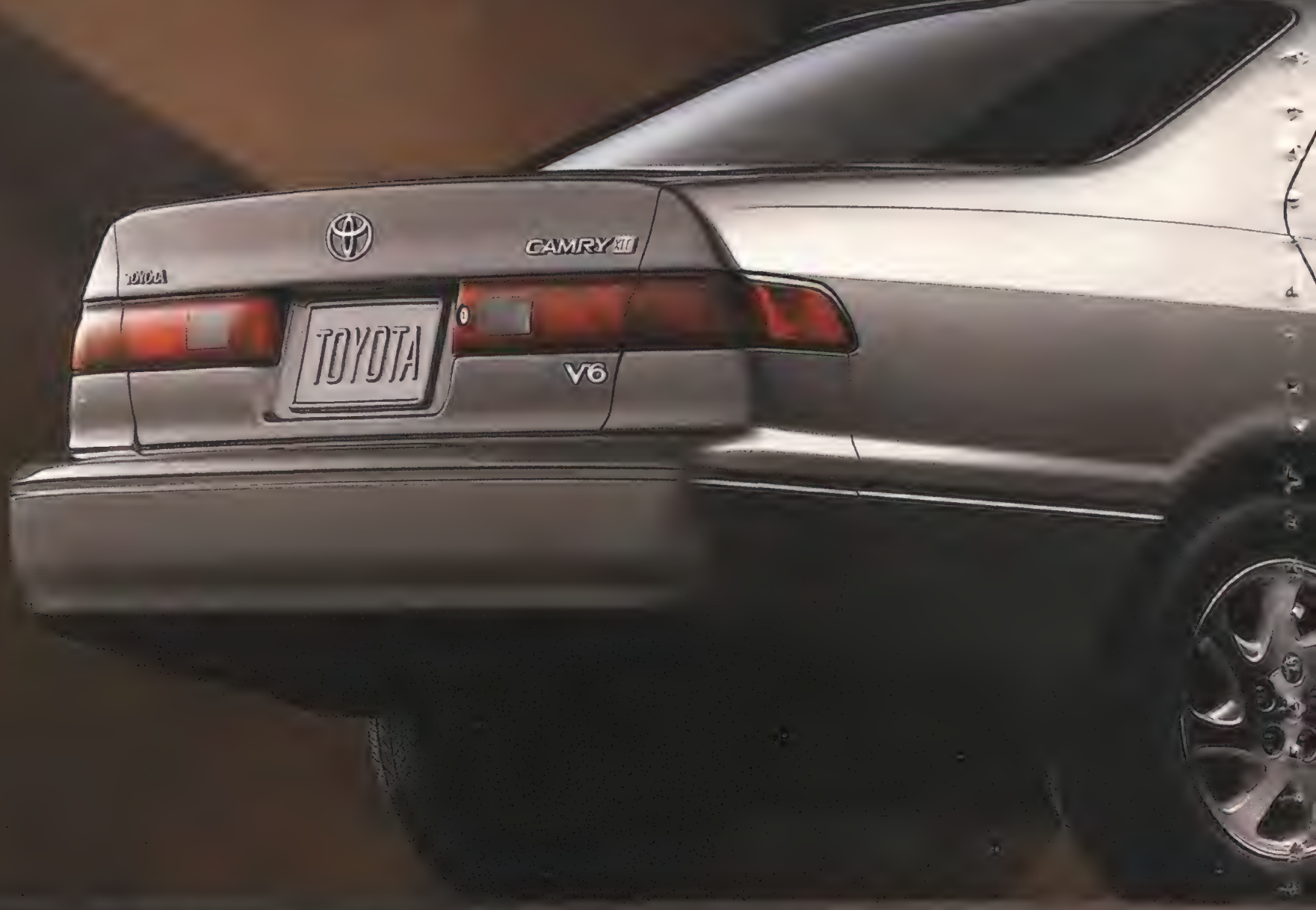

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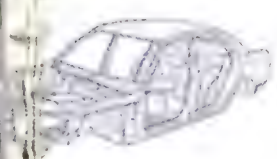

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By Donovan Webster

Traveling the long road to freedom, one step at a time

When historian Anthony Cohen set out to retrace a route on the Underground Railroad, he recovered a piece of American history

Through a dark midnight drizzle, Anthony Cohen is on the run. Like a slave escaped from a plantation in the antebellum South—only 150 years later—Cohen is testing his fate on the Underground Railroad. He has now spent 700 miles and six weeks engaged in hook-or-crook transport, moving fast and light, retracing a route once used by runaway slaves as they sought refuge in Canada.

As it was for his predecessors, Cohen's trip has been difficult. "I'll go by foot, boat, train, horse, buggy, any historically accurate way I can hitch a ride," he's fond of telling listeners. "I even had myself shipped by train in a tiny box—from Philadelphia to New York City. A slave named Henry (Box) Brown did that in 1848. He had himself mailed from Richmond to Philadelphia. Man, for me, that part of the trip was terrible."

$150 REWARD
RANAWAY from the subscriber, on the night of the 2d instant, a negro man, who calls himself Henry May, about 22 years old, 5 feet 6 or 8 inches high, ordinary color, rather chunky built, bushy head, and has it divided mostly on one side, and keeps it very nicely combed; has been raised in the house, and is a first rate dining-room servant, and was in a tavern in Louisville for 18 months. I expect he is now in Louisville trying to make his escape to a free state, (in all probability to Cincinnati, Ohio.) Perhaps he may try to get employment on a steamboat. He is a good cook, and is handy in any capacity as a house servant. Had on when he left, a dark cassinett coatee, and dark striped cassinett pantaloons, new—he had other clothing. I will give $50 reward if taken in Louisvill; 100 dollars if taken one hundred miles from Louisville in this State, and 150 dollars if taken out of this State, and delivered to me, or secured in any jail so that I can get him again.
WILLIAM BURKE.
Bardstown, Ky., September 3d, 1838.

On his 800-mile journey from Maryland to Canada, Cohen walked as much as 37 miles a day, striding always in the shadow of history's fleeing slaves. The fugitives were hunted mercilessly, as an 1838 broadsheet attests.

Right now, though, Cohen is traveling by every escaped slave's most standard means: his feet. In tonight's case, he's hoofing a rainy towpath along the Erie Canal in western New York State. He's exhausted and behind schedule. He's a little discouraged, too, though he's trying not to show it. Earlier tonight, he'd been buoyed by the prospect of making the nearly 40-mile trip to his next stop by boat, but departure time came and went—and he never heard from the captain.

So with more than 80 miles still stretching between him and Canada, and only three days to get there, Cohen must rely on himself to make up the difference. "It happens like that sometimes," he's saying between runner's gasps. "Promises get broken. You end up walking all night instead of taking a boat, where you could have rested. Can't let it get you down, though. You just put the miles you need to cover out of your mind—and you go until you get there."

This particular leg's duration, he knows, stretches 37 miles. It will keep him at a dogtrot until past sunrise. All night long, the sound of his footfalls will move across fields, swamps and suburban backyards; often he'll come close enough to houses to see what's on TV inside. There are few lights. Fortunately, the towpath is an easily followed conduit to the Niagara River and Canada beyond, just as it was for fugitive slaves.

And just as it was for escaped slaves, snarling dogs will

Photographs by Wayne Sorce

Painted in 1893, *The Underground Railroad* depicts Ohio abolitionists offering shelter at an 1850s safe house. From the 1830s to the end of the Civil War, the network guided 30,000-100,000 slaves to freedom.

chase Cohen. Mosquitoes devil him constantly. Frogs and crickets serenade his toil. At the end of this night, in the sleepy canal town of Middleport, New York, he's been assured he'll find a safe house. When he reaches it, the owners will give him food, plus a few blessed hours of sleep in an almost hidden back room. The next day, after an early dinner, he'll depart again, moving farther up the towpath toward Canada.

"At times like this," the 32-year-old historian says between breaths, "I try to think of the escaped slaves coming North. They wouldn't have quit. They had no choice. Most had never been off the plantation. Everything they knew—food, shelter, clothing—had always been provided. Then they were on the run: in unknown country, hunted, not knowing who to trust. Their only hope was a promise from the last safe house that a house up the road—perhaps a yellow one, with a quilt hanging on the line outside as a signal—would take slaves in. They had to avoid the slave-catchers. They were absolutely alone. Nobody would do this if they didn't have to."

Cohen stops to catch his breath. Gravel crunches beneath his feet. A startled heron squawks and takes to the sky, its departure pushing rings across the dark canal's rain-pocked surface. "You can only understand history so much from reading a book," he says a minute later, raising his pace once more. "Sometimes, to grasp the deeper 'whys' of things, you have to give yourself a new perspective. That's why I'm doing this."

To today's Americans, the Underground Railroad—a network of roads, rivers, conveyances and safe houses that guided an estimated 30,000-100,000 escaped slaves toward freedom between the 1830s and the end of the Civil War—remains perhaps our least-known roadway. Lacking the Oregon Trail's aura of pioneer gumption, the tragedy of the Trail of Tears or the eight-cylinder razzle of Route 66, the Underground Railroad has always been more associated with slaves and abolitionists than with fixed routes or solid locations.

Certainly many Americans know of Harriet Tubman, the fugitive slave who became the railroad's most famous slave transporter; and Frederick Douglass (SMITHSONIAN, February 1995), an escaped slave who rose to become an eloquent abolitionist and statesman; and even the abolitionist minister and editor, Henry Ward Beecher. But beyond these figures and a handful of their colleagues, the Underground Railroad means little to most Americans. Those who have studied histo-

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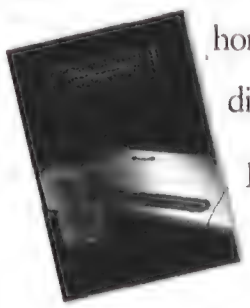

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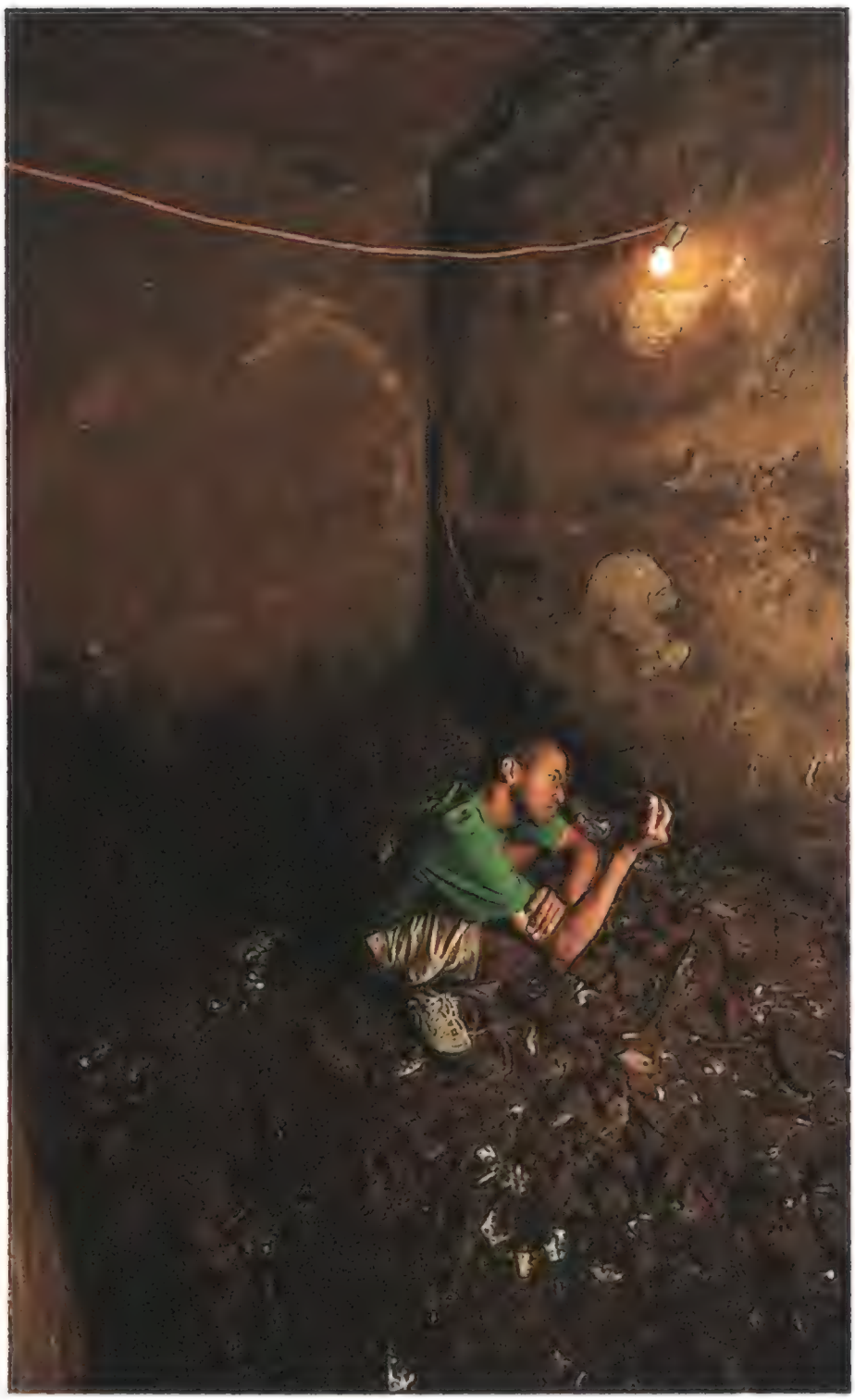

Cohen inspects debris in a secret room under a barn: the 12-by-15-foot room likely did house fugitive slaves.

ry may be familiar with the Fugitive Slave Law, passed in 1850, which made it a federal crime to harbor runaways. The legislation fast became a social and philosophical lightning rod, as it showed the U.S. Government to be a tacit supporter of slavery. But the actual, physical layout of the railroad itself? To most Americans it's an amorphous concept, a chunk of history lost.

Beginning in the spring of 1996, however, Anthony Cohen and one of his supporters, the National Parks and Conservation Association (NPCA), a private, nonprofit advocacy group that educates citizens about the national park system, began to change that perception. Just as Lewis and Clark's explorations are now marked along the Missouri and Columbia rivers, spurring curiosity about their journey, Cohen and others hope that, by the end of the century, routes and stops on the Underground Railroad will bear the same dignified status, perhaps even as a national park or a series of historic sites. "Much of the railroad is still around," says Cohen, strolling the sun-shot canal towpath the day before his 37-mile night. "You only have to look for it."

Seen correctly, Cohen says, the Underground Railroad is as compelling a story as any event in American history. "First, you've got the human-rights issue of slavery," he says. "Today its questions are still relevant. Would you risk your well-being to help others, even if you knew jail was the punishment for getting caught? Would you break the law to do what's morally right? Then you've got the drama of the fugitive slaves. Men, women and children running from a Southern plantation, fugitives in the purest sense. They lived wild in the woods. They stole hogs to eat. They risked their lives on this journey, and for one thing—freedom. They chanced everything to gain something we take for granted: equality as a human being."

To prepare, Cohen did little physical training—escaped slaves wouldn't have had such a luxury. Instead, he spent hundreds of hours in the Library of Congress and other archives, where he pored over documents and slave accounts to nail down routes and transport modes. Then, in Sandy Spring, Maryland, on May 4, 1996, after filling a backpack with a change of clothes, he hit the road like a fugitive slave: moving on foot, occasionally traveling on trains, hitching rides on canal boats. Unlike the slaves, he travels mostly by daylight, though travel in darkness is sometimes necessary. By the time he beds down at night—ideally in a barn or secret room said to have been an underground stop—he's traveled 10-25 miles, addressed school groups or village historic societies, and spent the rest of the day assessing purported underground-railroad rooms or anecdotes.

He has no assistant, no support staff. "It's all me," he says. "I've got a cellular phone, an 800 number with voice mail, and a site on the World Wide Web [http://www.npca.org]. People contact me. They say:

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'Tony, stay overnight in my barn, talk to my school.' And I try to set it up. I have to keep things pretty loose though, since I'm on a few missions at once: walk, speak, research. Keeping my schedule flexible is the only way I can do all three things and not go crazy."

His walk has also caught the media's notice, a circumstance that inspires increased hoopla with each successive stop. In fact, a few days from now, when he arrives in Buffalo, New York, for a Juneteenth Festival (an annual holiday celebrating the emancipation of slaves, usually observed on a weekend in the "teens" of June), he'll be greeted by 60,000 festivalgoers, three newspapers and a camera crew from the local ABC affiliate. All of this interest, Cohen says, stems from the fact that few Americans of any race know much about the Underground Railroad and how it affected their nation's history. Often run by Quakers or free Northern blacks, the railroad spirited fugitive slaves to safety; but it also served as saboteur in an era when America's industrial North and agrarian South were increasingly at odds.

"Remember that the South was an agricultural economy, primarily cotton," Cohen says. "Those crops were tended by unpaid slaves, who often made plantation owners incredibly wealthy. So the Underground Railroad wasn't only a high moral cause; it helped wound the Southern economy. Religious and political commitment to the Underground Railroad was one reason for its success; there were less noble pressures as well."

Cohen's immediate goal is to "heighten awareness" that, from the 1830s through the Civil War, a complex network of Underground Railroad routes existed. The one he is retracing worked up through Maryland and Pennsylvania, then swung west across New York State and into Canada via boats on Lake Ontario and the Niagara River. Other routes worked farther west, through Kentucky and Missouri, up into Ohio, Indiana or Illinois, finally crossing into Canada via Michigan and Wisconsin, and by boat on Lake Erie. Still others went south to Mexico or Cuba.

Cohen also wants to reinforce for people that, whatever transport was used—"And most everything was," he says—the railroad wasn't a locomotives-and-steel subway, a misconception that helped inspire the project. As the son of a retired Department of Agriculture entomologist father and a schoolteacher mother, Cohen was raised in the Washington, D.C. suburb of Silver Spring, Maryland. (Cohen's family name, it appears, does not come out of slavery. His great-grandfather was adopted by a Jewish family.)

After graduating from American University in 1994, Cohen went to work as a freelance historian for Montgomery County, Maryland. The county historical society had published his senior thesis, *The Underground Railroad in Montgomery County, Maryland,* as a book. One day in the spring of 1995, while Cohen was addressing a local school, a fourth-grader asked about the Underground Railroad's trains. "The other kids laughed at him, which got me thinking," Cohen says. "I mean, it wasn't a stupid question. The kid just didn't know."

Before long, Cohen began publicizing his idea for retracing the railroad and soliciting sponsors—out of which emerged his affiliation with the National Parks and Conservation Association. "Vincent de Forest, a mover and shaker in trying to get the Underground Railroad accepted as a unit of the National Park Service, pointed Tony our way," says Jill McKay, on-line services coordinator at the NPCA. "In March of 1996, as Tony was preparing for his walk, he began working with us as an intern, compiling our Underground Railroad database. Then someone thought to put his information

Donovan Webster, who walked with Cohen for part of this trip, writes from Charlottesville, Virginia.

Everywhere, Cohen found people excited about his odyssey: in Buffalo, New York, he leads a Juneteenth parade (opposite) and meets with the press (above); in nearby Pittsford, he talks with students (below).

on the World Wide Web, and we thought maybe he'll get one message a week: the Website gets several hundred visitors a day. At least ten of these people post messages for Tony every day. People have really hooked up to Tony's walk and, using our Website, they are inspired to pursue their own family history."

For his journey, Cohen was lent a cellular telephone and given an 800 number at NPCA. But he still had to go out and walk, researching as he went. A documentary film of the project is in the works—with equipment donated by the American Folklife Center of the Library of Congress—as is a book to be written by Cohen, which will filigree events of his trip with historic anecdotes about the railroad.

"I began finding stories almost immediately," he says. "I was directed to a black minister in the town of Waterloo, Maryland. His name was Reverend Howard, and he took me to a stream called Deep Run that had a series of caves along its banks. It was where Harriet Tubman used to hide fugitive slaves. After they'd had a chance to rest there, she'd lead them downstream to the Patapsco River, where a railroad line went. When a train passed, the slaves could catch it to Baltimore."

Cohen, however, has to be careful. A story's existence doesn't always mean it's true. Because of this, he's constantly double-checking background data with libraries and historic societies along the way. "My favorite false legend so far," he says, "happened in Poughkeepsie, New York. I was passing through and this man said: 'The Underground Railroad ended right here, in this town.' Well, because I check this stuff out, I said: 'OK, where did it end?' He pointed up the road to this sort of modern-looking apartment complex. He said: 'It ended at the Harriet Tubman Apartments.'"

Cohen laughs. "I marked it down in my notes," he says. "But I didn't check it out." He shakes his head. "That guy pretty much summed up what Americans know of the Underground Railroad. They don't know dates or routes. They know Harriet Tubman's name."

Another day finds Cohen not on the road but in the attic of the old Hargous-Briggs Mansion, in the canal town of Pittsford, New York. Pittsford, seven miles southeast of Rochester, was established in 1789. A prosperous town during the boom years of the Erie Canal, the 1820s and '30s, it is said to have been a major stop on the Underground Railroad.

The mansion is a hulking, Federal-style monster that's now part of the St. Louis Church and School. It also has all the earmarks of a onetime slave harbor. The street level is a quadrant of four square parlor rooms. The parlors to the house's south side, however, are a little less deep than those on the north. And while those southside rooms appear to share a common wall and a heavy swinging door, they don't. In between them, a secret passage of narrow stairs leads from the house's basement to its third-floor attic. In the cellar, an opening, now bricked over, faces the canal a short distance away. In the dark and stuffy attic, where Cohen now stands talking with the church's facilities manager, Sally Schrecker, a large wooden cage rests beneath the eaves. Cohen, who has opened the cage door and is now standing inside its 8-by-10-foot space, makes fast work of assessing its age. "How old did you say the house is?" he asks Schrecker. "Begun in 1812; finished in 1815. One of the owners was a judge."

"Hmmm," Cohen says. "That's certainly promising. Judges in fact were sometimes part of the Underground Railroad, since they socialized with the local ministers and educated people, who were usually among the railroad's supporters. Having a judge on the abolitionist side had big benefits. When someone would get arrested for harboring slaves, a sympathetic judge could dismiss the case on technicalities, or his office could lose

On the most excruciating leg of the journey, Cohen shipped himself by train, sealed in a crate, to reenact the ordeal of Henry (Box) Brown, who mailed himself via express train from Richmond to Philadelphia in a wooden box in 1848.

the paperwork—thereby throwing the whole thing out."

Cohen runs his hand across the hinges. "This ironwork is hand-forged," he says. "So it's possible it was here during the period of the railroad." He observes the cage's orientation in the attic, set back from a narrow window. "Look," he says. "This cage is 18 inches from the window and the wall. Why? It's so people on the street couldn't see what was inside." Inside the cage, he sees a length of forged chain attached to a fitting pounded deep into another roof beam. He says this arrangement looks like a standard shackle from the time of the Underground Railroad. "This room's a mystery," he says.

But he knows of other locations with parallels to this room. Occasionally, when someone hiding slaves feared local law officers were becoming curious, the harborer would bind and shackle the slaves and lock them up. That way, if the fugitives were discovered and accusations started flying, he'd say the slaves had recently been captured and were awaiting transport back South.

Cohen steps out of the cage, latching the door behind him. As he heads for the secret stairway, picking his way across the attic's patchy floor and exposed joists, he shrugs. "Is this a bona fide site?" he asks. "Perhaps. This stairway seems legitimate; the house certainly has the right lineage. But only documentation will authenticate the site. During the time of the Underground Railroad, few people kept documentation; they didn't want to get caught with incriminating papers. Unfortunately, that absence of records means that we are often left with little hard evidence."

On another afternoon, in the canal town of Spencerport, New York, perhaps 20 miles west of Pittsford, the cafeteria at Bernabi Elementary School is packed with kids. The room is sweltering: some 300 of Bernabi's third- and fourth-grade students are in attendance, rapt. Cohen is onstage at the room's far end. He has just started telling the story of Henry (Box) Brown. "He was a slave in Richmond, Virginia, and sometime in 1848 he had himself shipped to freedom in Philadelphia," Cohen is saying. "He did it in a wooden box measuring 3 feet by 2 feet by 26 inches. He was in there for 26 hours!" The students gasp. "So when I was in Philadelphia," Cohen goes on, "I decided to try the same thing, only I'd ship myself from Philly to New York City."

He sits on the floor, curled tight, knees at his chest. "With the help of a few friends," Cohen says, "we measured around me. My box's dimensions were 24 inches by 28 by 30. We built a trapdoor into one side, so the only person able to open it was me. We drilled one-inch air holes in the box, so I could breathe. Then we figured out that people would be able to see me, so we covered most of the holes over with stickers."

Cohen stands back up, pacing the stage again. "All I had in the box with me was my telephone, a bottle of water, a small quilt, a pillow and a pocketknife," he continues. "The trip was supposed to take two hours, but the train was late. It took more than five hours. Inside the box, the temperature rose to more than 100 degrees. My glasses fogged over. I could see sweat forming on the box's hinges; they were dripping. It was so hot I had to shift around and pull out my pocketknife. I cut the legs off my pants."

Then, as the train pulled out of the station, Cohen (who was traveling unbeknownst to railroad authorities) saw the door of the freight car slide open next to him: "It hadn't been locked!" The kids gasp again. "It was terrifying!" Cohen says. "I thought I was going to fall out! I could see through a little hole only partially cov-

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Although he did hitch boat rides, Cohen walked 120 miles of the Erie Canal, an important escape route.

ered by a sticker. I saw trees, cows, farms: New Jersey! It was all flashing past. And I kept thinking: 'If I get jiggled out, I'll die. I'll get smashed. But if I stay in this box much longer, I'm going to die from the heat.' The pain was terrible—I was all scrunched up. And I kept thinking: 'Come on, Tony, you can do this; Box Brown did it for 26 hours.' Then, when I got to New York, they almost didn't take me off the train. My box had been marked to go farther on, to Long Island, but some friends found me and pulled me off. When I got out, I drank water nonstop for hours. I'd sweat so much, though, that I didn't have to go to the bathroom for almost three days."

The children are amazed. The room—its 300 little faces fixed on the stage—remains silent throughout Cohen's monologue. When his talk ends, kids keep him trapped for another hour, asking questions about slavery, about his journey, about race issues and American history and whether he ever feels like quitting.

Later that evening I ask Judy Halley, the fourth-grade teacher who invited Cohen to Bernabi, how the assembly played. Walking alongside Cohen for a few miles as he continues up the towpath, she smiles. "Someone saw his Web page," she recalls, "so we e-mailed him, asking if he'd stop by. You wouldn't believe the difference this kind of presentation makes. Children learn that history happened in their town. That kind of realization opens a whole world to them."

Two relentless days of walking pass. Sixteen or 20 hours each. At 10 P.M. on Thursday night, in the canal town of Gasport, New York, he's still about ten miles from his destination—without enough time to walk the rest of the way. His hostess for the evening, Carol Murphy of Murphy Orchards in the town of Burt, New York, is waiting up for him. Cohen's especially interested in Murphy's e-mail message: beneath a trapdoor in her barn lies an underground chamber. It's a room said to have once housed escaping slaves. From what Cohen has heard, the Murphy farm—perhaps two miles from the shore of Lake Ontario and near the mouth of Eighteen Mile Creek—shows every indication of being the real thing. So at Gasport's steel deck bridge, which spans the canal, Cohen hops into a van and, in a few Detroit-made minutes, crosses a stretch of western New York that would have required hours on foot.

Immediately after meeting Murphy and her daughter, Xandy, Cohen is shown to the barn, where Carol opens a dusty, out-of-the-way trapdoor set into the floor. Xandy plugs in an orange extension cord that drops through the hole in the floor, and through a narrow, angled passage a light flicks on. "That's it," Carol Murphy says. "Would you like to go down and explore?"

A rickety wooden ladder descends through the tiny entrance and into a secret room. The air smells musty and carries an underground chill. The 12-by-15-foot room is covered in crumbling white plaster. The floor is coated in a layer of black, moldering detritus stretching to all corners. Even after 150 years, the scent of desperation or fear is easy to smell. You can feel it.

Cohen walks around the room. He posits that, given the narrowness of the entrance, this was not a root cellar or a fireproof storage area. The smallness of the passageway wouldn't allow for anything larger than human beings to slip through. Seeing soot on one wall and a hole in the arched ceiling, Cohen surmises that a fireplace may have stood there, its chimney pipe passing through the hole. The floor is among the most amazing finds of his trip.

Layered with six inches of smashed crockery, fragments of shoes, rusted eating utensils, pieces of leather gloves, tar paper shreds and unidentifiable moldering black bits, it is a cultural archaeologist's mother lode. Cohen hopes that archaeologists will someday visit here to carefully sift the floor's pile.

"Look at the way the room's shaped," Carol Murphy shouts down through the entrance. Cohen glances around. The room and its passageway form a rugged L,

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As he sets foot on free soil in Fort Erie, Canada, Cohen is greeted by a well-wisher wearing 19th-century garb.

with the largest portion invisible to anyone poking his head down through the entrance. "I think there used to be a board barricade down there," she says. "We think it was there so if slave-catchers showed up, it could be fitted into place like a fake wall, so the room would look like a small cellar."

Cohen spends a few more minutes in the chamber. He lifts objects off the floor and examines them, then places them back precisely where he found them. Coming up the ladder, Cohen is ecstatic. Carol Murphy is waiting near the barn's sliding door. "What's down there," Cohen says, "is history. Beautiful, amazing, untouched history." He points down the ladder's rungs and back into the hole. "The Underground Railroad," he says, smiling. "It might very well be right down there."

The next evening, after a long day of walking, Cohen finally sees Canada. It's sunset. And as he strolls through the tended grass of Niagara Reservation State Park, he's bubbling over. After days of "film at eleven" TV-news interviews, he's dodged the media tonight. By his own choice, nobody will be there to ask how he's doing when he finally lays eyes upon what every fugitive slave once hoped to see.

As Cohen approaches Niagara Falls and the yawning chasm between the American and Canadian shores, sunlit mist from the falls throws a sentimental, pinkish glow on the scene. At first, Cohen can't believe he's arrived; he's hopping with excitement, almost leaping into the air with each step.

Then, as he nears the falls' edge, he becomes more introspective. For a long minute he stares at the palisades on the far shore: Canada. For another long time he looks at the falls, the tumbling water hypnotic and full of shifting color in the sunset. His dark eyes are blank, almost glazed. For a man who usually has a palette of quick comments and easy facial expressions on reserve, Cohen's features have gone slack. "After six weeks of walking; after all these miles," he says, "It's almost too much to take in. Huh. There it is."

Then after a stop in Buffalo, where he marches as a guest of honor in the Juneteenth Festival parade and films an interview for local television, there is only one thing left to do. On Sunday, June 16, at a little after 5 in the afternoon, Cohen boards a small fishing boat at the Harbour Place marina in Buffalo, and sets out for Canada. His pilot is Kevin Cottrell, a local historian and black-history tour operator. Cottrell, who has guided groups on legs of the Underground Railroad since 1993, is giving Cohen a wide berth as they board the small, red aluminum boat for the mile-long run across the river.

"I know what he's feeling right now," Cottrell says. "And it's powerful stuff. For black people in America, gaining freedom and understanding the sacrifices of those who came before us, that's our heritage. When you get to this river, and you get your first taste of what it must have been like to reach out and touch that sense of freedom . . . Well, it knocks you back."

Cohen, for his part, is pacing the marina's dock, hugging most of the dozen people who've arrived to see him off. Tears often well in his eyes. "It sounds corny, I know," he says, shaking off a weepy bout, "but after walking all that way, I thought this would be the happiest moment of the whole trip. Instead, I feel incredibly sad. More than any other time in the past six weeks, I'm suddenly understanding how difficult this trip must have been. The fugitive slaves had families they'd never see again. They were leaving the only life they'd ever known. They were leaving it all behind, right here."

Then he gets in the boat and goes. Ten minutes later, Cottrell's skiff noses against the Canadian shore at Fort Erie, Ontario, at a known landing for runaway slaves. As Anthony Cohen steps from the boat onto land, conflicting emotions seem to cross his face like a lightning storm. From all around, members of the Niagara Black History Association approach and welcome him to Canada. He climbs the bank before turning to glance back across the river. He drops to his knees. Tears come into his eyes. "Without this shore," he finally says, "the fugitive slaves would have had no refuge." He pats the grassy soil, then breaks into a bittersweet smile. "It looks so simple," he says, plucking up a few strands of grass as he emits a tiny, relieved laugh, "but this is freedom."

A day earlier, Cohen exults on reaching Niagara Falls (U.S. side); for slaves, the sight meant freedom was nigh.

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THERE'S ONLY ONE

By Sue Hubbell

Three cheers for King Pumpkin—orange and lovable

This is the time of year when his admirers salute the monarch of vegetable gardens with contests, comestibles and corny jokes

Warning! This story contains pumpkin jokes.

Pumpkin jokes?

Yeah.

Q: What's orange and goes *putt-putt-putt*?

A: An outboard pumpkin.

No? Well what about this?

Q: What vegetable does a pumpkin turn into when an elephant sits on it?

A: Squash.

Perhaps we'd better move directly to pumpkin sports. There is, of course, the contest known as Punkin Chunkin. In Lewes, Delaware, grown men and women spend considerable time building ever fancier catapults, slingshots and cannon so that once a year they can compete for a $2,500 prize by hurling pumpkins long distances. The record to date is just over half a mile. But that is more a matter of mechanics than skill. For the latter, I prefer the Pumpkin Roll, one of the high points of the four-day pumpkin festival that takes place each year in Barnesville, Ohio, just south of Interstate 70 in the eastern part of the state.

How do you roll a pumpkin? You put it on the starting line at the racecourse, and with a bat you paddle it to the finish line some 50 feet away. Bats are straight, orange-colored sticks with taped handgrips. The original Barnesville course was slightly downhill, which led to a problem of runaway pumpkins. The present raceway is in front of the Barnesville Fire Department, where the incline is less steep, and has been laid out so the rollers have to paddle their pumpkins uphill.

When I watched the 1995 race, I was standing on the sidelines next to the wife and children of Dan Moellendick, dedicated pumpkin rollers all. I had no idea that Dan was a former champion nor, of course, that he would win the race we were watching (prize $20), but I was able to get some tips from his family. Wrist action on the stick is important. Keep your eye on your pumpkin, and keep it under control. Pumpkin size and shape are critical. Small, round pumpkins are best; large or oblong ones are too hard to steer.

"No, no, this is one of *our* pumpkins," said Dan's wife, Connie. She was clutching a speedy little one to her chest, refusing to lend it to a pumpkinless youngster, a would-be roller, for fear it would be damaged before her own turn to roll. Sighing, the child went over to a nearby pickup truck and selected a slightly larger (and therefore somewhat harder to steer) pumpkin furnished by the race committee . . . and lost.

What am I bid for this pumpkin?

More than 100,000 people come to Barnesville each year for the Pumpkin Roll and other events: the crowning of the Miss Ohio Pumpkin Queen, the choosing of the Pumpkin Baby, the weighing-in of King Pumpkin. They buy pumpkins and pumpkin crafts. They eat pumpkin pie, pumpkin fudge, pumpkin ice cream. And they feel obliged to attend that bittersweet event, the Auction of Unclaimed Pumpkins. Barnesville's water tower, looming over the town, is permanently painted orange. During the festival, the citizenry's fashion runs to bright orange sweatshirts.

Ohio is a top pumpkin-growing state. Others include Illinois, California, New York and Pennsylvania. All told, the nation harvests more than 60,000 acres of pumpkins each year. As it happens, the Barnesville area is not a notable producer, but the festival has taught residents how much there is to admire about pumpkins—especially big ones.

The winner of the 1995 King Pumpkin contest weighed in at 656 pounds. This is shy of the 914-pound behemoth that took first prize at the 1994 New England Giant Pumpkin Weigh Off in Topsfield, Massachusetts, but it is large enough to have required a crane for mounting King Pumpkin on its "throne." The monarch was orangy-pinky-greenish in color and sagged sideways, collapsing under its own weight.

Size contests are a staple at most of the festivals commonly held each fall in the leading pumpkin states and other enlightened areas. One of the biggest and best known of these takes place in Circleville, in central Ohio; it attracts nearly a half-million visitors each year. Started in 1903, the Circleville Pumpkin Show is also one of the oldest festivals. Barnesville has been staging its celebration for 33 years.

It is generally accepted by most experts that today's pumpkins—varieties of *Cucurbita pepo, C. maxima* and several other species—are special squashes, all members of the gourd family, along with cucumbers, cantaloupes and watermelons. It is also generally accepted that they originated in the New World, where pumpkins and other varieties of squash were selectively bred by Indians to produce better taste and more fruit. This may have occurred as long ago as 5000 B.C.

The precise origins of pumpkins (if indeed they have precise origins) are lost in a mist of botanical confusion and a zesty tendency to hybridize. Even nailing down a species name doesn't do much good.

A particular strain of *C. pepo*, one often used for pumpkin pies, is what you or I would certainly call a pumpkin—orange, round, lovable. But other strains of the same species turn out to be what we call acorn squash and zucchini. It is best not to get lost here in a taxonomic tangle.

That reminds me of a joke.

A frequent contributor, Sue Hubbell wrote about taxonomy in May. She is currently working on Waiting for Aphrodite, *a book about invertebrates.*

X: What's the difference between a pumpkin and a mailbox?

Y: I don't know.

X: If you don't know, I'm never going to ask you to mail a letter.

Gourds, squashes and pumpkins are the shmoos of vegetabledom; they are some of the most useful plants known to mankind. A pumpkin's pulp, seeds and flowers are edible and nutritious. Its leaves and seeds have medicinal properties. Scooped clean of flesh and dried, its rind makes a good dipper or pot.

The pumpkin can also be transformed into foods of almost an infinite variety. Pickles, pies, puddings and breads. Soups, milk shakes and pancakes. The early settlers brewed pumpkin beer. So does one of my friends. It is *very* tasty.

The pumpkins that the Indians were growing when the first white settlers came to these shores became a staple for the newcomers, who learned to dry pumpkins, make stews of them, bake them. When fodder was short, they fed squash and pumpkins to their livestock. English settlers usually called pumpkins "pompions" (or "pumpions"), which was the English word for melons, the nearest things to pumpkins they had ever seen. In due

At the Pumpkin Show in Circleville, Ohio, a strongman lifts a giant with his teeth (opposite) and visitors ogle a lavish display. In Barnesville (above), a youngster and friend masquerade as a pair of pumpkins.

course, "pompion" became the American word "pumpkin," which migrated back to Europe.

The derivation of "pompion" is convoluted, wiggling back through English to Middle French, ultimately into Greek as *pepon*, meaning "cooked by the sun, ripe." The term still meant "melon" when Shakespeare wrote *The Merry Wives of Windsor*, for in it he calls Falstaff "this unwholesome humidity, this gross watery pumpion." But by 1729 or so, when Robert Samber first translated Charles Perrault's "Cinderella" into English, the despised younger daughter's magic coach, which he called a pompion, may really have been a pumpkin, not a melon, for by then the word had at least appeared in England in reference to the American vegetable.

There seems to have been no coach at all in the folk stories from which Perrault spun his sanitized "Cinderella" in 1697. It was his invention to have a fairy godmother send Cinderella to the garden to pick the finest *citrouille* she could find to be turned into a coach. Although *citrouille* does mean "pumpkin" today in French, it also has an older meaning of "gourd," and that is probably the vegetable Perrault had in mind.

An even worse botanical and literary muddle exists in "The Pumpkinification of the Divine Claudius," a lampoon written by Seneca in first-century Rome, about the immediate afterlife of the emperor Claudius. Claudius, called "a monster" by his mother, was remembered by his contemporaries as a buffoon. Seneca's satire, which is too scatological to detail in this magazine, tells of Claudius' attempt to be deified after his death. Heaven's gods reject him and he ends up in the netherworld. Instead of *apotheosis*, being made into a god, Claudius experiences *apocolocyntosis*, which has been loosely translated into English as "pumpkinification." There is obviously a problem here, since the pumpkin was a New World vegetable unknown to Seneca. The Romans did know about gourds, however, and a more accurate translation of *apocolocyntosis* would be "gourdification."

John Campbell, a professor of classics at the University of South Florida in Tampa, has learned that in Seneca's time, gourds were used as cheap, disposable chamber pots. It is his theory that Claudius was transformed not into a pumpkin but into a chamber pot.

Now what about the headless horseman in Washington Irving's "The Legend of Sleepy Hollow"? We know that what he threw at Ichabod Crane really was a pumpkin because it was discovered the next day, despite Ichabod's disappearance. Americans, after all, knew pump-

Competitors in the Punkin Chunkin contest at Lewes, Delaware, fraternize in front of winning air cannon.

kins. In Irving's day, they were even saying "some punkins!" to mean "really special." Why doesn't anyone say "some punkins!" anymore, I wonder. If you are young and with it today, you *do* talk about the Smashing Pumpkins, a popular alternative rock group. My 16-year-old neighbor, a better judge than I am on such matters, says that the Smashing Pumpkins make music that is "sort of a combination of pop and heavy metal."

What about Peter the Pumpkin Eater?

Peter, Peter, pumpkin eater,
Had a wife and couldn't keep her;
He put her in a pumpkin shell
And there he kept her very well.

Iona and Peter Opie, editors of the *Oxford Dictionary of Nursery Rhymes*, date this bizarre verse to 1825. They also cite later versions that may have older antecedents, including this one:

Peter, my neeper,
Had a wife
And he couldna' keep her,
He pat her I' the wa',
And lat a' the mice eat her.

What are we to make of this? What does it have to do with pumpkins? Well, "neep" is an old word for "turnip." In the old days, a hollowed-out neep made a neep-lantern, forerunner of the familiar pumpkin jack-o'-lanterns we have today.

The use of pumpkins as Halloween lanterns is an American tradition dating from the 1840s, when a wave of Irish immigration to this country brought the custom of creating a neep-lantern with a face carved on it for All Hallow's Eve. The origin of that practice, in anthropological and folkloric speculation, dates back to ancient Celtic fire rituals marking the turning of the year.

It all began with a turnip

Sensible immigrants, with pumpkins newly to hand, no doubt realized that it was a lot easier to hollow out a pumpkin than a turnip, and so today it is the former, not the latter, that we put out on our doorstep to welcome trick-or-treaters. Good thing, too; a turnip would be hard to set on end.

The word "jack-o'-lantern" is said to come from an Irish legend about a stingy, mean but clever man named Jack. In a common version of the tale, this fellow kept the Devil up an apple tree until he promised never to take Jack's soul. When Jack died a few years later, he was not allowed into heaven so he then applied to hell. The Devil was as good as his promise and refused Jack entrance. He did take pity on Jack, however, and tossed him a live coal from hell's fires to light his way through the darkness. Jack put it into a turnip that he just happened to have handy, and he has been wandering the earth with it ever since.

We need some jokes.

Q: What did one jack-o'-lantern say to another?
A: "Cut it out."
Q: What did the pumpkin say to his girlfriend?
A: "I seed you with another guy."
Q: What's orange and lived in Egypt?
A: Tutapumpkin.

Anne and David Carter live in Oxford, Maine, where they grow around five tons of pumpkins every year on two to three acres of their ten-acre vegetable garden. They sell most of their pumpkins at their farm stand and wholesale the rest to other farm markets. David insists that pumpkins are not hard to grow, especially in the manure-enriched soil of his bottomland, which was probably once a delta of the Little Androscoggin River. Pumpkins, he says, take about a hundred days to grow; his only real problem is keeping deer out of them.

On the summer day that I visited the Carters, David showed me their vegetable garden, lush and bountiful looking. The sprawling pumpkin vines, with their huge, deeply lobed triangular leaves, extended up a small rise on one side of the garden and disappeared behind it, giving the impression of an infinity of pumpkins march-

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Me and the
boys at the lake
6-13-58

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ing west. For pies, David recommends a small variety called New England Pie Pumpkin. He explains that the pumpkins known as Max and Connecticut Field, bigger with stringier flesh, are grown mainly for display. In former years, back when his father was farming, pumpkins grown in the region were canned by the local Medomak Canning Company and distributed throughout New England under the One Pie brand name. I lived in New England then and can remember reaching for that brand when I was going to make a pie, probably because the slightly old-fashioned label showed a wedge of pie that looked delicious.

The One Pie brand still exists and still outsells other brands in New England, according to Richard Penley, owner of the Penley Corporation, a clothespin manufacturer in West Paris, Maine, and president of OBP, Inc., which distributes food products. OBP bought the assets of the bankrupt Medomak company—including the One Pie trademark—in 1986. Now the pumpkins sold under that label are grown and canned in the Midwest.

Do people still make pumpkin pies? I ask him. "Our sales are pretty consistent from year to year," he says. "Of course, we don't know if people are making pumpkin bread. And I read that feeding pumpkin to dogs is supposed to be great for their coats. Still, I'd guess that most of our customers are making pies."

The first published pumpkin pie recipe, dating back to 1796, was printed in *American Cookery*, the first "American" cookbook. Its author, Amelia Simmons, specified "one quart pompkin stewed and strained, 3 pints cream, 9 beaten eggs, sugar, mace, nutmeg and ginger, laid into paste, and with a dough spur, cross and chequer it, and baked in dishes three quarters of an hour."

I think it's time for a closing joke. This one, like the others, comes from *The All-Around Pumpkin Book* by Margery Cuyler, published by Holt, Rinehart and Winston.

Q: What does a pumpkin pie say after a big meal?

A: "That was filling."

A cat perching on a fence vies for the attention of trick-or-treaters and judges at a jack-o'-lantern contest held yearly in Chadds Ford, Pennsylvania. Halloween lanterns hark back to Celtic fire rituals.

LONG DAYS.

UNCONVENTIONAL THINKING.

COLD PIZZA.

PANIC AT MIDNIGHT.

LOTS OF COFFEE.

INSPIRATION AT 3 A.M.

GREAT CARS.

WELCOME TO LIFE AT CHRYSLER

January 10, 1992:
Chrysler President Bob Lutz introduces new Jeep® Grand Cherokee by driving up steps and through plate glass window of Detroit Auto Show. "Wouldn't fit through the door," explains Lutz.

February 20, 1992:
Under the leadership of Chief Engineer Francois Castaing, Chrysler celebrates one year of working in platform teams–multidisciplinary groups brought together for more innovative, responsive automaking.

March 15, 1993:
Two engineers "messing around in the garage" develop Chrysler's clutchless manual–dubbed AutoStick.[8]

April 1, 1992:
First Dodge Viper roars out of the Mack Avenue Engine Plant in Detroit expressly redesigned for specialty vehicle production. (Reports of V10 engine rumble shattering neighborhood windows unconfirmed.)

September 28, 1992:
Playing a video game with his son, Chrysler engineer conceives idea for driving-simulator technology that allows new vehicles to be "test-driven" even before they are built.

January 7, 1993:
Plymouth Prowler–concept car developed as tribute to the American hot rod–draws huge crowds at auto shows across United States, then pleas to put it into production.

August 4, 1993:
Another Chrysler first: A group of engineers, working late on new design for dual sliding minivan doors, places order for 125 large pizzas–believed to be largest in (admittedly sketchy) history of Lorenzo's Pizza.

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July 15, 1992:
Platform team reads letters from minivan owners asking, "Why not put a sliding door on the driver's side too?"

August 4, 1993: Another Chrysler first: A group of engineers, working late on new design for dual sliding mini-van doors, places order for 125 large pizzas–believed to be largest in (admittedly sketchy) history of Lorenzo's Pizza.

November 6, 1993: Chrysler employees–7,000, give or take a few–move into 3.5 million square foot Chrysler Technology Center. A few engineers rumored missing in the days following the move.

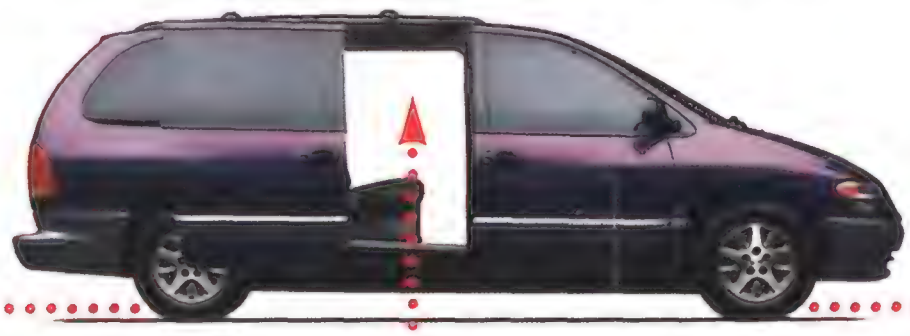
December 6, 1993: Viper series appears on network TV.

May 5, 1994: Group of Chrysler engineers spends day at local shopping mall parking lot observing drivers loading packages into their cars–leading to new design for seatback release in trunk on new compact sedan.

June 6, 1994: Viper series disappears from network TV.

March 10, 1995:
Redesigned Chrysler, Plymouth, and Dodge minivans reach dealerships with features including dual front air bags,† optional dual sliding doors, Easy Out Roller Seats,™ and up to 14 (count 'em) cup holders.

September 18, 1994:
After exhaustive testing, AutoStick is approved for production in 1996 Eagle Vision TSi.



June 5, 1995:
Chrysler Chairman Bob Eaton competes in Neon Challenge celebrity auto race; is narrowly defeated by young TV star.

No one can say we at Chrysler Corporation haven't been busy over the past few years. We introduced "cab-forward" to the automotive lexicon. Proved with Neon that an American-made small car could not only survive but thrive. Made an American icon, our minivan, even better. And showed what's in our hearts by dreaming up audacious concept cars like Dodge Viper and Plymouth Prowler—then turning them into production models.

Our unprecedented run of new products may be why people are calling Chrysler "one very confident car company." But apparently that confidence runs both ways. Our customer loyalty (as measured by the number of people who purchase a second consecutive Chrysler Corporation vehicle) is higher than it's ever been. And the accolades our products have earned

, So with
best of both
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what's unde
And someth
out of peop

Visit our World Wide Web site at http://www.chryslercorp.com, or call toll-free 1-888-GREATCARS. †Always wear your seat belt. Jeep is a registered trademark of Chrysler Corporation
*Strategic Vision's 1996 Vehicle Experience Study" surveyed 35,652 October-November new vehicle buyers of 200-plus models after the first 90 days of ownership.

ıne 5, 1995:
ɔsler Chairman
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ung TV star.

Chrysler Sebring Convertible

Plymouth Neon Coupe

Dodge Ram Van

Dodge Avenger

Chrysler Town & Country

Jeep Wrangler

Dodge Dakota Club Cab

Plymouth Prowler

Plymouth Neon Sedan

Dodge Viper

Chrysler Concorde

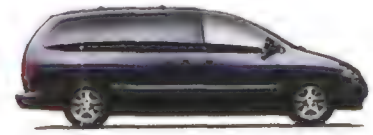
Dodge Ram Pickup

Dodge Stratus

Dodge Caravan

Dodge Neon Sedan

Jeep Cherokee 4-Dr



Plymouth Grand Voyager

Chrysler Cirrus

Plymouth Voyager

Chrysler LHS

Dodge Grand Caravan

Eagle Talon

Jeep Grand Cherokee

Dodge Ram Wagon

Dodge Viper GTS

Plymouth Breeze

Jeep Wrangler

Dodge Intrepid

Dodge Ram Chassis Cab

Jeep Cherokee 2-Dr

Eagle Vision

Dodge Ram Club Cab

Dodge Neon Coupe

production models.
roducts may be why
confident car com-
runs both ways. Our
umber of people who
Corporation vehicle)
colades our products

have earned over the past few years speak for themselves.

So with a Chrysler Corporation product, you get the best of both worlds: a vehicle that doesn't look or drive like everybody else's, built by a company that understands it's what's under the sheet metal that counts in the long run. And something else: the inspiration that just seems to pour out of people who really, really like what they're doing.

a registered trademark of Chrysler Corporation
er the first 90 days of ownership

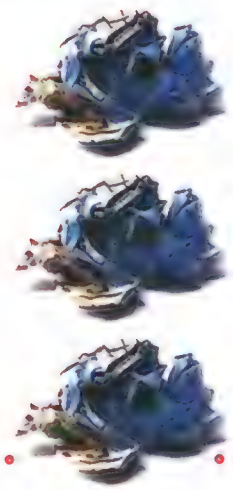
GREAT CARS.

CHRYSLER CORPORATION

December 1, 1994:
Popular Science bestows "Best of What's New" Grand Award on Chrysler Cirrus/Dodge Stratus.

November 30, 1994:
Chrysler Cirrus voted Motor Trend's Car of the Year.

November 20, 1994:
Chrysler Cirrus, first in all-new series of compact sedans, appears in showrooms.



March 15, 1995:
Chrysler Design Chief Tom Gale goes back to the drawing board once more on his own street rod.

January 1, 1996:
Petersen's 4-Wheel & Off-Road names Jeep Grand Cherokee Laredo V8 "4x4 of the Year"–third straight year the title has gone to Chrysler Corporation vehicles.

Later that week:
CTC bowling team captures second place in Thunderbird Lanes Winter Carnival of Pins.

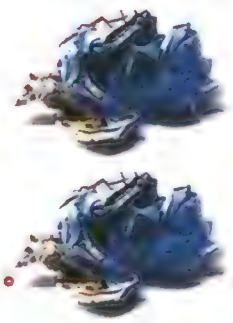
April 23, 1996:
*Strategic Vision releases its Total Quality Award™ winners for "Best Ownership Experience." Winning their categories: Dodge Intrepid, Chrysler Town & Country, Jeep Grand Cherokee, and Dodge Ram Pickup.**

September 7, 1993: Dodge and Plymouth Neon named "Best of Show" at Frankfurt Auto Show by AutoWeek.

July 1, 1994: In its 40th Annual Design Review, I.D. Magazine calls Dodge/Plymouth Neon, "a new archetype for personal transportation."

September 10, 1994: Neon wins international "World Car 1994" award from Italy's Motor Magazine. "Che bella macchina!"

Hi.



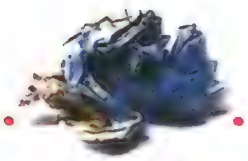
January 1, 1994: Dodge/Plymouth Neon named Automobile Magazine's "1994 Automobile of the Year"–second consecutive year for a Chrysler product. (Anyone see a trend developing here?)

January 10, 1994: The result of an unprecedented approach to the product development process, Dodge and Plymouth Neon officially go on sale at a sticker price starting at $8,975.

September 30, 1994: Chrysler Design Chief Tom Gale revises design of his street rod. Again.

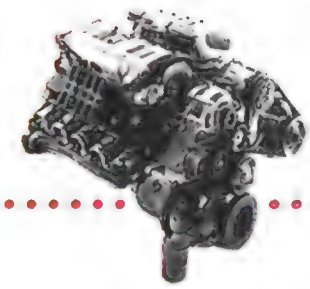
November 1, 1994: Dodge Intrepid wins coveted title of "Most Washable Car" from Michigan Car Wash Association.

September 15, 1992: America learns the term "cab-forward," as launch of new LH sedans–Chrysler Concorde, Dodge Intrepid, and Eagle Vision–is "an event that could redefine the shape of family cars," according to USA Today.



May 4, 1992: Chrysler Design Chief Tom Gale revises design of custom street rod he is building in his garage.

November 12, 1992: Jeep Grand Cherokee wins Motor Trend's Truck of the Year Award.



January 7, 1993: New Dodge Ram Pickup changes the rules with aggressive styling and Magnum V10 engine–most powerful engine ever in a pickup.

April 22, 1992: Chrysler wins award from Environmental Protection Agency for pollution prevention.

November 5, 1992: Chrysler honors engineering staff for 60 new patents awarded to company in 1992.

December 3, 1992: LH cars named Automobile Magazine's "1993 Automobile of the Year."

June 10, 1993: LH models receive Gold Industrial Design Excellence Awards from Industrial Designers Society of America.

OUR PURPOSE:

TO PRODUCE CARS AND TRUCKS

THAT PEOPLE WANT TO BUY,

ENJOY DRIVING,

AND WANT TO BUY AGAIN.

GREAT CARS.

CHRYSLER CORPORATION

Guess what my li'l Chopin played today

By Rudolph Chelminski

When I was about 17, persuaded by arguments whose logic I have long since driven from memory (the guilty party must have been either my mother, who never sang a note, or my elder brother, who rather enjoyed bellowing), I briefly took singing lessons. One-on-one with Grace Lamarr in her Westport studio, I would assume the regulation posture—facing out toward the "audience," one hand demurely resting on the piano, the other at my chest in a kind of Presidential salute—and wreak cultural vandalism on Stephen Foster, Schubert or Mozart.

The only lasting knowledge I carried away from the experience was that "Il mio tesoro" could not possibly be sung by any normally constituted human being, unless Don Ottavio happened to have a wind tunnel built into his thorax. Mercifully for all, my career as an operatic tenor ended before I celebrated my 18th birthday.

A couple of decades later, fortuitous circumstance led me back in the direction of musical education—not for me this time but for my son. The fortuitous circumstance was named Nicole de Havilland-Cortes. She was a pianist who specialized in plunging kids into a bath of hot Bach. "The younger you get 'em, the better," she said in her business-like way—"then full speed ahead! They'll get turned off to music forever if you try to pound scales and sight-reading into them. Just make them play, and everything else will come later."

Even age 3? "But yes," cried Mme. de Havilland-Cortes. "Perfect!" And so it was that our son became a child prodigy.

Well, in a manner of speaking. At 3, he had the advantage of up to 15 years over Mme. de Havilland-Cortes' other students, and everyone in show biz knows there's no competing with an animal or a kid. With his little blond head, his big blue eyes and his tiny feet suspended in midair from the piano stool, all it took was the first six notes (the slow ones) of Bach's unfinished fugue to knock any audience dead.

My wife and I made all the predictable noises that parents will make: "You don't suppose, I mean, um, that he really *might* be, well, uh, a prodigy?" Parents are such suckers. I'd be willing to bet right now that, at this very instant, there are at least a million couples around the world asking themselves the same question after hearing their darling's violin squawk or clarinet squeak for the first time.

We encouraged Romy, of course, and played him endless hours of classical music. He insisted on having the record cover in his hands as he listened, so he could look at the picture. One of his favorite pieces was Prokofiev's *Lieutenant Kije Suite*, even though the only picture on the cover was a big black-and-white photograph of Prokofiev, bald, bespectacled and benign. Presently we saw how deeply that image had worked its way into Romy's brain. "Look!" he piped up urgently one afternoon as we were driving to town. "There's Prokofiev on a motor scooter." Sure enough, a balding, bespectacled little man, benign of appearance, was weaving through the traffic.

That year Romy told us he wanted a wig for Christmas. Of course! Every picture of Bach on the record covers showed him wearing a wig. Did we actually go and look for one? We certainly did. Luckily a Star Wars spaceship came along that struck Romy's fancy even more, and we were spared the embarrassment of having our 3-year-old toddling around the neighborhood in an oversize white wig.

Romy's total immersion in music so thoroughly jumbled present and past, reality and imagination that it occasionally spooked visitors unfamiliar with his juvenile *Weltanschauung*. In the middle of his brief but all-consuming Chopin binge, a lady bent down to him, cooing: "And when did you start listening to these mazurkas, you sweet little boy?"

"When I was dead in Poland," he shot back, poker-faced.

Inevitably, the day came when we had to buy Romy his own piano. A mere upright wouldn't do, naturally—concertistes don't play on uprights—and it had to be white, because one of those record covers featured a white piano. We took out a loan and got a baby grand. What next?

Next, it turned out, was the beginning of the end of prodigyhood. As the years passed and Romy's feet grew closer to the floor, the moment arrived when he had to start reading music, doing scales and practicing—in short, working. That changed everything. That was *boring*. By the time Romy's feet reached all the way to the floor, my wife was playing that white piano more than he was.

Well, you may turn them off Bach but not necessarily everything else. We discovered that a few years later, when that great clanging freight train called adolescence arrived. Romy went back to music after all, but not quite as we had figured ten or so years earlier. He discovered rock. Oh, dear.

Romy's in Boston now, studying to be a professional. He's practicing scales and reading notes. His instruments are electric guitars and synthesizers, and his daily references are not Johann Sebastian and Wolfgang Amadeus but Bon Jovi and Sting. His big old LP records have been replaced by compact disks, which come in those teeny-weeny boxes on which no kid will ever be able to see a decent-size picture.

The white baby grand? It's all paid for now—and hardly ever used.

By Richard Conniff

'You're buying it, you better make sure it's what you want'

If that 'treasure' you acquire at one of Uncle Sam's auctions turns out to be a pig in a poke, you'll have only yourself to blame

Burt Friedman (opposite) was hoping to corner the market on inflatable wig stands, but he's taken a bath.

At a New Jersey auction (above), a ring man takes a bid while the auctioneer, on the podium, tries to top it.

In a vast sea of truck trailers parked by a pier in Port Elizabeth, New Jersey, Greg Carrino perches in his tassel loafers atop a 23-foot-long propane tank, reciting specs into a portable phone. "John? Greg. Listen, there are three tanks. They're brand spanking new. Start writing. The MAWP is 250 PSI at 650 Fahrenheit . . ."

Carrino is trying to sell the tanks to a buyer for an African chief and get them onto a transatlantic ship in seven days. As it happens, he doesn't actually own the tanks yet; they're the property of the U.S. Government, a minor detail he'll attend to on Thursday. "You get hold of the chief and tell him this is definitely worth taking on spec," Carrino says. "We're not going to have any competition. I'm telling you, John, we could steal it."

But all over New Jersey this week, other people with telephone-antenna heads and calculator hands are busy selling merchandise—maybe even the same merchandise—which they also hope to steal on Thursday. So when Carrino gets back to the gate, two competitors are already waiting. One of them asks what's out in the parking lot. The sales catalog describes the tanks merely as "equipment, asstd."

"Couple white tanks," says Carrino, friendly but suddenly weak on details. "Some sort of gas thing."

"Is it complete?" asks the competitor, who is studying Carrino's forced smile for telltale cheek-tremor.

"Oh . . . complete tanks," says Carrino, nonchalantly. "No equipment." In fact, there are three crates of equipment, but someone has already scraped off the packing list. What competitors do not know cannot help them.

This cagey skirmish is a warm-up for Thursday's open warfare, when the U.S. Treasury Department will conduct one of its regular auctions of goods that have been confiscated or otherwise accumulated by friendly agents of the Customs Service, the Internal Revenue Service, the Secret Service, and the Bureau of Alcohol, Tobacco

Photographs by Steven Boljonis

and Firearms. These are the auctions you read about in all those enticing ads in the supermarket tabloids: "Seized Sports Cars from $350" and "Gov't Foreclosed Homes . . . Available for Pennies on $1." The Treasury Department conducts about 600 of these sales annually at sales centers across the country.

This particular auction will not include anything remotely resembling the shiny new Porsche 911 in the ad. But some lucky buyer will walk away (literally) with a 1985 Nissan Stanza labeled "nonoperational." A connoisseur of drug-bust furniture will take home a bedroom set in a black-lacquer-and-gold-fleck finish, complete with a poster of a couple walking through the surf over this immortal thought: "You cannot pour love on others without getting a few drops on yourself." And in the heat of the auction, certain shrewd buyers will also find genuine treasure, at prices approaching, yes, theft. This is the tantalizing possibility that will bring 500 bidders through the doors on Thursday.

You can buy almost anything at these auctions (whether you will ever be able to sell it again is, however, your problem): illegally imported mud from the Dead Sea, 17,000 false teeth, a shipment of frozen pork heads, the mansion used in the Eddie Murphy film *Beverly Hills Cop II.* "We've sold everything from toilet bowls to horse sperm," says Judy DeSimone, a sales coordinator for EG&G Dynatrend, the company that manages the sales on a government contract. Honesty compels her to add that the horse sperm had dried out by the time it moved through the courts and arrived at auction. But with a salesperson's indomitable urge to think positively, she says: "Just add water and shake well."

The government gives no guarantees. "Everything you're buying is as is, where is," says Tim Minoughan, the regional sales manager for EG&G, giving his standard lecture for first-time buyers. "You're not getting any warranty of who, what, where and when. *You're* buying it, *you* better make sure it's what you want."

Whatever he is selling, Minoughan's job is simply to get the best possible price. (All proceeds go directly into the Treasury Department's assets forfeiture fund.) But he says he prefers well-informed buyers. Newcomers caught up in the excitement of the auction may bid more, but they sometimes refuse to pay when they suddenly realize they have just purchased, say, 88,000 pounds of fresh onions or a late-model Jeep at $2,000 over list price. Experienced buyers are also better equipped to handle certain sales conditions. If you buy the Dead Sea mud, for instance, you'd better have a buyer lined up abroad because the government will give you just 60 days to get it out of the country. Much of the sale merchandise is labeled "export only"—embargoed items, for example, such as carpets from Iran.

Some items have an illicit past. The Beverly Hills mansion was seized in one of the largest money-laundering schemes in history. Even the 88,000 pounds of onions once concealed a cocaine shipment.

But most of the merchandise is mundane. In this Thursday's auction, for instance, Lot 105 is a bric-a-brac menagerie of 150 brass camels, lions and unicorns. Lot 193 is 2.4 million plastic shopping bags. Lot 110 is a bronze Art Nouveau statue of a bare-breasted woman with a set of wings on her that would turn Batman to mush. About 20 percent of the merchandise in a typical Treasury auction are items that simply got lost in shipping, or were abandoned because a deal fell through or the shipper did not want to pay duty.

The time for buyers to find out just what they might be getting into at this week's auction is the Monday beforehand, at a warehouse in an industrial park in Edison, New Jersey. Apart from awkward items like airplanes and propane tanks, almost everything in the auction is on display here for a one-day viewing. The

In a Newark warehouse, prospective bidders look at statues and other goods during an auction preview.

Richard Conniff's book Spineless Wonders: Strange Tales from the Invertebrate World, *published by Henry Holt & Co., will be available next month.*

The Treasury Department obtains booty primarily through confiscation by its agencies or abandonment after shipment from abroad. Often, merchandise must be exported within 60 days after it is auctioned off.

atmosphere is a cross between the Metropolitan Museum of Art and a used-car lot.

At the display case for Lot 111 is George Shammas (p. 88), a small, formal man in gold-rimmed bifocals and a herringbone jacket, who is studying some glass wine pitchers and perfume bottles flecked with dried mud. They appear to be from ancient Rome, by way of Syria.

"That's a teardrop bottle," says Siham, his wife, pointing out a double vial shaped like a small vase. She has a connoisseur's enthusiasm for the emotional life of household objects. "When they cried," she explains, "they collected the tears in these bottles, one side for the left eye, one for the right."

Switching between English and Arabic, they debate whether a Middle Eastern brass grater was for cheese or lemons, and whether some 11th-century wooden stamps with an olive-leaf-and-cross design were for pastries or textiles. The two of them have retired from the antique jewelry business in Manhattan. Siham, a dark-haired woman in a modest black coat, wants to buy everything. George is the skeptic.

"I think there'll be a killing," he says of Thursday's auction, indicating the other buyers. "They'll kill each other."

He's mainly interested in the stacks of Persian carpets. "We buy for a hobby, to give to friends," he says. "If you're going to a wedding, and you spend $50 or $100, what can you buy? Nothing. If you give them a carpet, it's a royal gift. You follow my way of thinking?"

It is a splendid way of thinking. Time will reveal, however, that it is also a fib. Nobody at these auctions is quite what he appears to be. Whispered conversations have a way of halting in mid-breath till strangers pass out of earshot. Nobody tells the truth, except maybe to disparage merchandise in which a competitor might take an unwelcome interest.

Just down the row, Burt Friedman, a veteran buyer from Philadelphia, is contemplating a 1985 GMC van lined with carpet (shag, not Persian). It has 22,000 miles showing on the odometer, to which, in his mind, he has added 100,000. "That van's been repainted," he says. "It just had some electrical work done, and there's a sticker in the back that says it had auto body work in Houston. Plus, the guy has a compass on the dash. People who have a compass on the dash aren't just driving around

Framed by helicopter cables he bought at auction, Greg Carrino flaunts some of his other loot, similarly acquired, from an engine starter for a 747 (at his right) to a cellular phone relay unit and Meerschaum pipes.

the block. So who knows? That'll go for $4,000, and I wouldn't give half that."

Friedman says the good old days in government auctions are long gone. "The government's not dumb anymore," he laments, but the buyers are. The sales are widely advertised now. Anybody with a credit card can show up to bid, and the lots are small enough that ordinary buyers stand a chance against the professionals.

"Now it's like shopping at Macy's," says Greg Carrino (above). "They put it in a display case and put a big giftwrap bow on it, and the competition is fierce." The pros liked it better a few years ago, when they had to root around dirty warehouses and puzzle out the merchandise on their own. In this fashion, Carrino once recognized a lot labeled "spare parts" as helicopter engines, and bought six of them for a total of $900. But in those days, the Treasury Department also routinely lost money on its auctions. Now, after paying EG&G, it makes a modest profit of about $20 million a year.

Even in its modern configuration, the auction is more like *Let's Make A Deal* than Macy's. The equivalent of the mystery gift behind Door Number Three is Lot 260, labeled "personal effects." It consists of eight pallets of cardboard crates bulging with luggage and other unknown items all held together by a thick glazing of shrink wrap. The crates are up on a high rack so that potential buyers cannot, as is their wont, rip them open for closer inspection.

Jerry Herskowitz (p. 93), a retired cop living in Maryland, and his wife, Cathy, have made a business of buying such lots. Their business cards say simply, "We buy and sell anything." They once paid $1,000 for a personal

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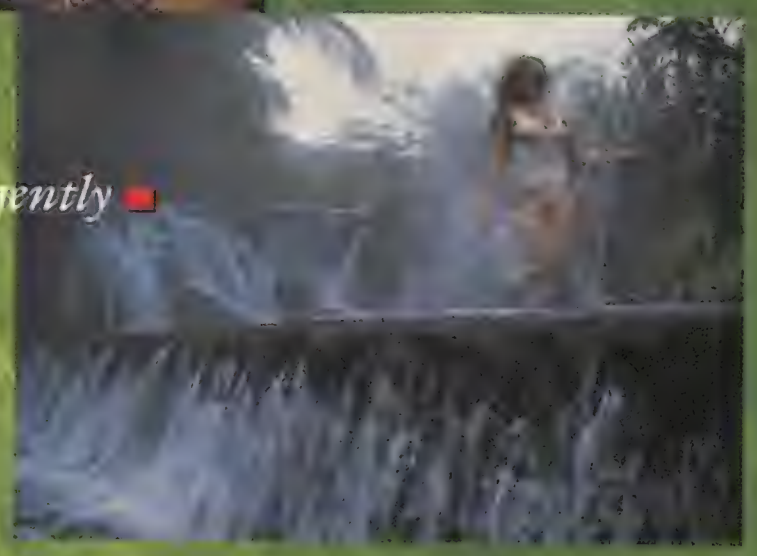

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effects lot that turned out to contain a 160-volume set of books in an Asian language. Undaunted, Jerry flew out to a conference of Asian scholars in Chicago, got the set identified as a rare edition of the Tibetan Tripitaka, and later sold it to a Buddhist monk from Philadelphia for $14,000. On the other hand, says Cathy, a personal effects lot from Korea turned out to contain a lifetime supply of dried fish flakes, and smelled like it.

Lot 260 intrigues Jerry partly because the crates originated in Kuwait, and because the shipper also sent some of the antiques and collectibles being sold at this auction. Jerry hopes Lot 260 will contain more of the same. But he will bid, he says, for one basic reason: "I'm a gambler. I love the surprises."

Early Thursday morning, the first-time buyers wander around like goldfish at a shark feeding. Three young bidders have come down from Quebec intent on automotive bargains, though they speak no English, much less the peculiar dialect used by auctioneers. An EG&G official shrugs and says, "All they need is money."

George and Siham Shammas (here, in their Brooklyn home) may spend $100,000 on carpets at an auction.

The professionals circle at the back of the auction room and sometimes nod together in conference. "If you don't get here at 8:30, you miss out on certain sidebars," says one of the regulars, though "sidebar" may not be quite the right word; these aren't the sort of conferences you would want to be caught having in front of a judge. "Certain deals were made," he explains. "Guys approached me: 'Are you interested in this lot? Want to go partners?' These are big-ticket items."

Proving collusion can be difficult

The technical term for such deals is "collusive bidding," though the bidders themselves prefer to speak about "certain relationships that have developed over the years." Proving collusion can be difficult, according to EG&G's Minoughan, unless you actually catch someone in mid-auction dumb enough to say, "Stop bidding, we'll talk later."

And if there is an air of collusion, there is also open rivalry. One of the buyers today is a South American known to EG&G's DeSimone simply as "Factory Man." He earned the name at the last auction, she says, because he paid $2,000 for a can-sealing machine under the impression that he was buying an entire factory. ("You think I would sell you a whole factory for $2,000?" she asks, with withering disbelief. But this being a government auction, that is exactly what he thinks.) At the same auction, Factory Man conceived a grudge against another regular bidder, and he has now declared his intention to scorch the opposition and buy everything.

This may be unwise. The professional buyers fondly recall an Iranian in a three-piece suit who arrived intent on teaching them about how the big boys do business. Over the course of the auction season, the regulars toyed with him, bidding him up then ducking out. "You have to know when to back off, and when to come on hard," says one buyer. "They can bury you." At last report, the Iranian was buried under $2 million worth of unsold merchandise in a warehouse in Las Vegas.

Factory Man takes a few lots in the early bidding but does not appear intent on following the Iranian's example. The GMC van sells for $3,000, and Burt Friedman doesn't even bid. He's brought along a dispiriting reminder of just how far wrong even an experienced buyer can go at these auctions. It's an inflatable wig stand—"Stand-O-Matic—*The wig stand that goes where you go!*" He's had two truck trailers full of Stand-O-Matics sitting on his property for the past 20 years. "I keep looking at it and thinking it's something," he says, wistfully. "They float upright in water." Maybe Christo or some other maestro of site art could send 10,000 of them nodding down the Rahway River?

When the Persian carpets come up, George Shammas discreetly lifts one index finger to raise the price $1,000

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Safes from Yugoslavia and pictures of Saddam Hussein were offered recently in a lot with other miscellany.

at a time. Over the course of perhaps two minutes, he acquires a half-dozen lots and spends about $100,000. Either he goes to a lot of weddings, a bystander suggests, or he's really a carpet dealer.

Shammas grins. "We are not carpet dealers. We are adventurers. Money in the bank makes 4 percent a year."

The next item in the auction is a 30-person underground shelter "dedicated to the protection of people during and after . . . power failures, nuclear power plant accidents, nuclear/chemical terrorism, and full-scale protracted nuclear, chemical and biological war." The original buyer is said to have been one Saddam Hussein, which is why the shelter was seized.

But the bidding today is between a New Age sort of guy in the front row and a professional buyer at the back. The New Ager wants to use the shelter as a cabin at the Tennessee property where he goes nature-walking. The professional has already sold it to a Texas rancher as a bunkhouse for hired hands. The auctioneer tries to run the bidding up at $500 a pop, but the professional slows things down, pivoting his hand horizontally at eyebrow level to bid half that. "You have to give the other guy time to think if he's paying too much for something he doesn't really need," he says. But the newcomer takes it, at $3,500. Afterward, at the back of the room, a buyer named Amram Weinstock offers to pay him $3,500 and let him keep the shelter, if he will bury Saddam Hussein inside.

"Better yet," Weinstock says, "bury him without the shelter. I'll pay you double."

Weinstock is the class clown of the auction, and also one of the more aggressive bidders. He's a Hasidic Jew from Brooklyn, with a curly, grizzled beard, thin sideburn braids folded behind his ears, and a long, somber blue coat. But he bids joyously, jabbing his forefinger in the air and bouncing on his toes. He delights in giving the auctioneers $100 when they're looking for $1,000, or even $50 when they want $5,000. But he's also liable to jump up the bidding by several thousand dollars, to spook a rival, or bail out at $15,100 yelling, "He can have it!" then dive back in again at $15,300. "This is life," he exults with clenched fist, between bids. "It's all for mental play." In this fashion, he drives off a bidder from Guyana and takes 70,000 bags of 50 chopstick sets each, at 23 cents a bag.

The auctioneers work in shifts to maintain control ("These people will eat you up if you're green," says one) and to keep up the machine-gun pace: "Two-two-two, and $250, and three-three-three, and six and six and six, it's $650. Anybody else at $650? Last call, and $750, $850 . . . $850 I have, lookin' for nine. *Down* it goes, $850, your way." It's all about short-term memory, another auctioneer explains: "The money goes in your ear and out your mouth."

When they are not at the podium, the spare auctioneers work as ring men in the audience. They round up bids like cowboys chasing strays on a long cattle drive. The cries of "*Yep!*" and "*Yep!*" and "*Yea-uh!*" fly from all corners of the room, until the auctioneer finally says, "I got a lot of '*Yeps!*' Looks like everybody wants it. Who'll bid $50 more?" And then they're away again.

Goosing up the bid with body language

The ring man's job, like the bidder's, takes a certain sense of gamesmanship. The basic body language is that you never point at a bidder or raise your hand in a stop sign. You also need to know when to come in close, says a ring man named Rob Doyle, and when to stay back. "Sometimes a bidder doesn't want to be identified by the ring man, so I'll look left when my bid is right." Other times, a bidder will come right down the aisle to intimidate a rival by bidding in his face.

Doyle is all body language as he works his corner of the room. When a bidder hesitates, Doyle makes a slashing gesture with one hand over his shoulder and the auctioneer drops his ambitions back a notch: "$750, $750? OK, I got $700." Next time the bid comes his way, Doyle bends his knees in front of the bidder, holds one palm open at floor level, then eases slowly, pleadingly upward, goosing forth the bid, till he's at full height and the words "nine hundred" bubble almost involuntarily from the bidder's lips, at which Doyle yelps, "*Yeah-up!*"

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The crowd thins out, as the bidding gets serious, and then the body language of the professional bidders also becomes more evident. They stand with one foot up on their folding chairs. They glower over reading glasses worn low on the bridge of the nose. They nod the bid upward and grind their chewing gum so the muscles in their jaws leap out in big, hostile bunches. As the time to bid on the propane tanks draws near, Carrino sits up on the back of his folding chair at one side of the room, where he can keep everyone in sight. He is outwardly serene, a bit like a bird of prey. Carrino nods Factory Man upward through the early going and takes the lot for $6,000, a bargain (they cost $18,000 new), if not quite theft. Then Factory Man and Weinstock chase each other up on a bid. Afterward, Weinstock bustles over to say, "You do that to me one more time, I shoot you."

"You got no right to talk to me like that," says Factory Man, though he figures his bidding has cost Weinstock an extra $6,000. They belly each other off to an open area and deploy all the familiar gestures of schoolyard disputes—the pointing, the hands with spread fingers up in front of the indignant chest, the conciliatory touch to the shoulder, the elbows flying out in rejection—until they achieve an uneasy détente.

By 3 P.M., with 346 lots sold, the auctioneers, ring men and bidders have all just about worn one another out. The tally for the day stands at $1.4 million.

Now comes the sticky part. You have to pay for what you've bought and, over the next week or so, get it out of the warehouse. Worse, you have to figure out how to sell it again. Asked what she has bought, one newcomer intent on a killing says, "I have no idea. I didn't even know they were on display." Nevertheless, she has paid $1,300 for 31,000 pieces of "giftware: asstd sizes" and "rubber parts: asstd." She figures they must be worth at least a nickel apiece, whatever they are, and in one of the day's most touching displays of faith in our nation, she adds, "If it was junk, the government would've thrown them out, right?"

And there they are in the display case, not junk at all, but little fruit-shaped erasers, Styrofoam pterosaur gliders, unidentified rubber knickknacks, and an abundance of colorful little cardboard disks leftover from the Pog fad that tore through American elementary schools a year or two back.

Instantly, with an entrepreneurial gusto that makes one think maybe the nation isn't so bad off after all, she collars a man at the same display case. "If you want to get a piece of the order," she says, "I'll be outside by the hot dog cart when this is over. I already have one buyer."

In truth, even the professionals must wheel and deal to turn a profit on their investments. "I'll have to eat rice and beans for a long time," jokes Weinstock, who has taken a second lot of chopsticks, bringing his total for the day to 124,000 bags or roughly six million sets of chopsticks. But he adds, "You need to know your markets. You need to know where you're selling. It's not a gold mine. It's a business." This advice is perhaps more apt than he would like: through some horrendous oversight, the chopsticks turn out to be Japanese, whereas the market Weinstock knows is Chinese.

"He thought he was going to flip it, *boom*, and make a home run," a rival says, with a predatory chuckle. "Now his meter's ticking and he has to put a lot of money into trucking and storage." The rival is willing to help out, in the spirit of cooperation, at a substantial markdown.

The New Ager who bought the Saddam Hussein biological warfare bunker has meanwhile discovered that it's going to take more time and money to move it to Tennessee than he had anticipated. He's looking around for the professional who underbid him, and not understanding the prevailing spirit of cooperation, he thinks he's going to sell it to him for what he paid.

Jerry Herskowitz also gets some bad news a few days later when he peels back the shrink wrap on the mystery gift behind Door Number Three, Lot 260, the personal effects from Kuwait. It contains some African bags and clothing, and a few salable antiques, but nothing to justify the $7,750 he has spent on this gamble. He is undaunted. He once ended up with 12 boxes of glass eyeballs and, after a little thought, sold them to a wax museum. He will sell this stuff, too.

Nobody's looking back. Two weeks and five days after the sale, Greg Carrino's propane tanks leave Port Elizabeth on a freighter bound for Africa. But for him it's a done deal. The next big government auction is just ahead; the sharks are already beginning to circle.

Ex-cop Jerry Herskowitz and his wife, Cathy, enjoy part of what their business cards say they buy: everything.

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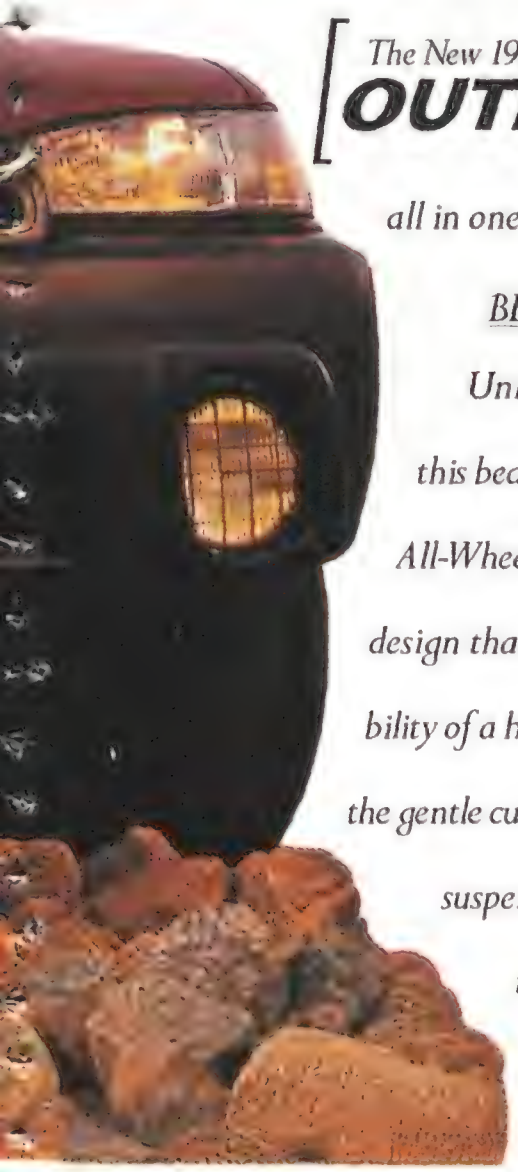

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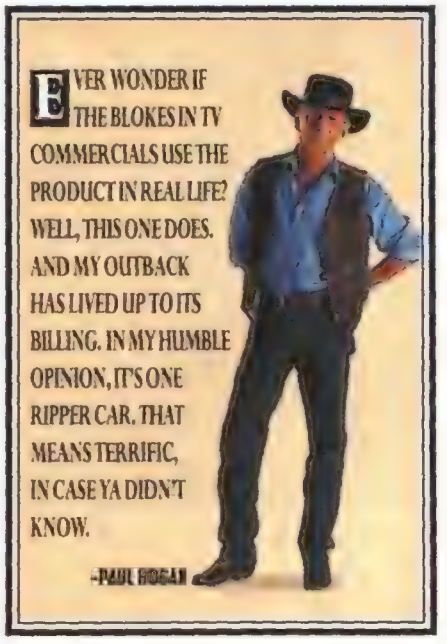
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By Martin Bailey

Edgar Degas's last years: making art that danced

An exhibition at the Art Institute of Chicago proves that, contrary to popular wisdom, the Impressionist master just kept getting better

With its shimmering and subtle colors, *Before the Ballet*, 1890-92, is characteristic of Edgar Degas's later works. Typical, also, is the emphasis on one or two figures, preoccupied with their tasks and oblivious of the viewer.

"I want people to believe me wicked," Edgar Degas once confessed to his niece. It was Degas himself who did the most to spread the scandalous stories that so famously surrounded his later years. The aging artist relished portraying himself as a recluse and hinted at licentiousness with his female models. He spoke disparagingly about his work, claiming to be going blind. Those around him tended to accept much of what he said, and Paul-André Lemoisne, the artist's biographer, chronicled how Degas lapsed into "premature retirement," resigning himself to the "loneliness of old age."

Degas reinforced this image of a curmudgeonly artist in his last self-portrait (p. 99), dating from the late 1890s. He has a worn-out, lugubrious expression, his hair has turned white and the redness around his eyes suggests the problems with his sight. In the background is a sketchy pastel of one of his own works, a woman drying her hair. There is a poignant contrast between the aging artist and the female in her prime. Yet after completing this self-portrait, done in his mid-60s, Degas would work for nearly 15 more years. During this period he was to create some of his finest works.

An exhibition now at the Art Institute of Chicago challenges the myths about Degas's later years, with a display of a hundred oil paintings, pastels, charcoal drawings and sculptures. "Degas: beyond Impressionism," which opened September 30 and runs until January 5, 1997 (sponsored by J. P. Morgan), is one of those shows that will change the way we see an artist's work. Its argument, put simply, is that we have been wrong to write off the last third of Degas's life. "The late work of Degas is just as powerful as what he did before. In terms of his influence on 20th-century art, it was even more important," claims British art historian Richard Kendall, guest curator and author of the exhibition catalog (distributed by Yale University Press).

The 1880s were a period of transition for Degas. In 1884 he had marked his 50th birthday, an event that, Kendall points out in the catalog, set off a personal crisis. Reflecting on his celibacy, his failing eyesight and what he regarded as his uncertain artistic achievement, he wrote to a friend: "I have lost the thread of things. . . . I piled up my plans in a cupboard for which I always had the key. And now I've lost the key." Two years later the final Impressionist exhibition was held in Paris, effectively ending the movement with which Degas had been so closely associated. The 1880s also saw important changes in Degas's art, both in subject matter and technique. In his Impressionist days, he had depicted laundresses and milliners, scenes from café-concerts and brothels, the ballet stage, jockeys at the racetrack and society portraits. Increasingly, however, his work became dominated by female figures, usually dancers or bathers. At the same time, he began to move away from oil paints to pastels, which he used to create shimmering color effects. His compositions became simpler, done in a broader, more expressive style.

"Degas: beyond Impressionism," which has just finished its successful opening run at the National Gallery in London, concentrates on the period from 1890, when the artist was 56, to his death in 1917. Organized by Kendall, with cocurators Douglas Druick of the Art Institute of Chicago and John Leighton of London's National Gallery, it is the first exhibition to focus on this period. "We are trying to explore and probe what Degas was really doing in his later years," explains Druick. An examination of the artist's techniques has provided new insights into his unusual choice of tracing paper on which to draw and the special role that sculpture played in his work. Recent research has revealed that contrary to assumptions, Degas continued to exhibit in his later years and remained an active member of the Parisian art scene. He worked right up until his late 70s, and many pictures have been wrongly dated to earlier years. These new findings suggest that although there is some truth in the image of Degas the recluse, particularly at the very end of his life, the reality is more complicated and considerably more interesting.

Degas's living arrangements provide a telling insight into his personality and work habits. In 1890 he rented the top floor of an apartment building at 37 Rue Victor Massé, on the southern fringes of Montmartre, already an established base for artists and galleries. Initially Degas had another apartment nearby where he slept, but by 1897 he had given this up and taken the two floors beneath his studio. The three floors provided spacious accommodation for a bachelor, but by this time Degas was a successful artist and well off (his major indulgence was buying pictures for his impressive collection).

At 37 Rue Victor Massé, life was highly compartmen-

A correspondent for the Art Newspaper, *Martin Bailey is the author of recent works on Vermeer and Dürer, as well as three books on Van Gogh.*

talized. The second floor, with his bedroom, was his private domain. On the floor above were the salons where he received visitors, and it was here that the conventions of bourgeois life were strictly observed. His studio was on the top floor, a dusty area crammed with paraphernalia. The concierge once succinctly summed up the divisions for a visitor: "Degas sleeps on the second, eats on the third and works on the fourth."

The second floor was kept locked and was opened only to his closest friends, but for the privileged visitor it was a treasure trove. Walter Sickert, the British painter, recalled being ushered into the large room that Degas called his "museum," containing dozens of the finest works from his private collection. Sickert threaded his way "through the forest of easels standing so close to each other that we could hardly pass between them, each one groaning under a life size portrait by Ingres, or holding early Corots." Although mostly works by 19th-century French artists, the collection included a scattering of old masters, such as two El Grecos. Degas kept his personal favorites in his bedroom, including paintings and studies by Delacroix and Manet, as well as some of his own pictures. Above his bed hung an erotic Japanese print of courtesans in a bathhouse.

Visitors were normally received on the third floor, where, as Kendall writes, "the proprieties of middle-class life were respected to an extraordinary degree." Degas dressed in a dark suit to receive his guests, welcoming them in the two large salons and a dining room, furnished in an old-fashioned, almost grandiose style. All the walls were densely hung with pictures, and there were cabinets of sculptures, displays of Japanese books and piles of lithographs. On the same floor Zoé Closier, his fierce but loyal housekeeper, had her room.

Collection Jan and Marie-Anne Krugier

Foundation Rau pour le Tiers-Monde, Zurich

A rare foray into what Degas termed fantasy, *Steep Coast* (left), 1890-92, portrays a landscape that is actually a recumbent woman, her hair loosely hanging at right. His pastel *Self-Portrait* (above) is also from the 1890s.

The studio on the fourth floor could hardly have been a greater contrast, a scene that Degas's artist friend Paul Lafond called an "indescribable disorder." Among those who attempted to record the setting was Pauline, a model who came to know the room intimately: "Although vast, it was gloomy, because the high north-facing windows . . . were almost obstructed by a linen curtain, . . . only a dim daylight filtered in, hardly reaching the end of the studio. This feeble light was interrupted everywhere by cupboards, numerous easels jumbled together, sculpture stands, tables, armchairs, stools, several screens and even a bathtub used for posing models. . . ." The only space left for Degas to work was very confined, at the front of the studio just under the windows. Pauline hated the dust; the housekeeper was forbidden to sweep the studio except around the stove, the modeling platform and a narrow strip running down the middle of the room. Apart from these small areas, Degas did not want his studio clutter disturbed. Although the models sometimes asked the housekeeper to dust the bench where they left their clothes, Zoé always reminded them of "Monsieur's ruling."

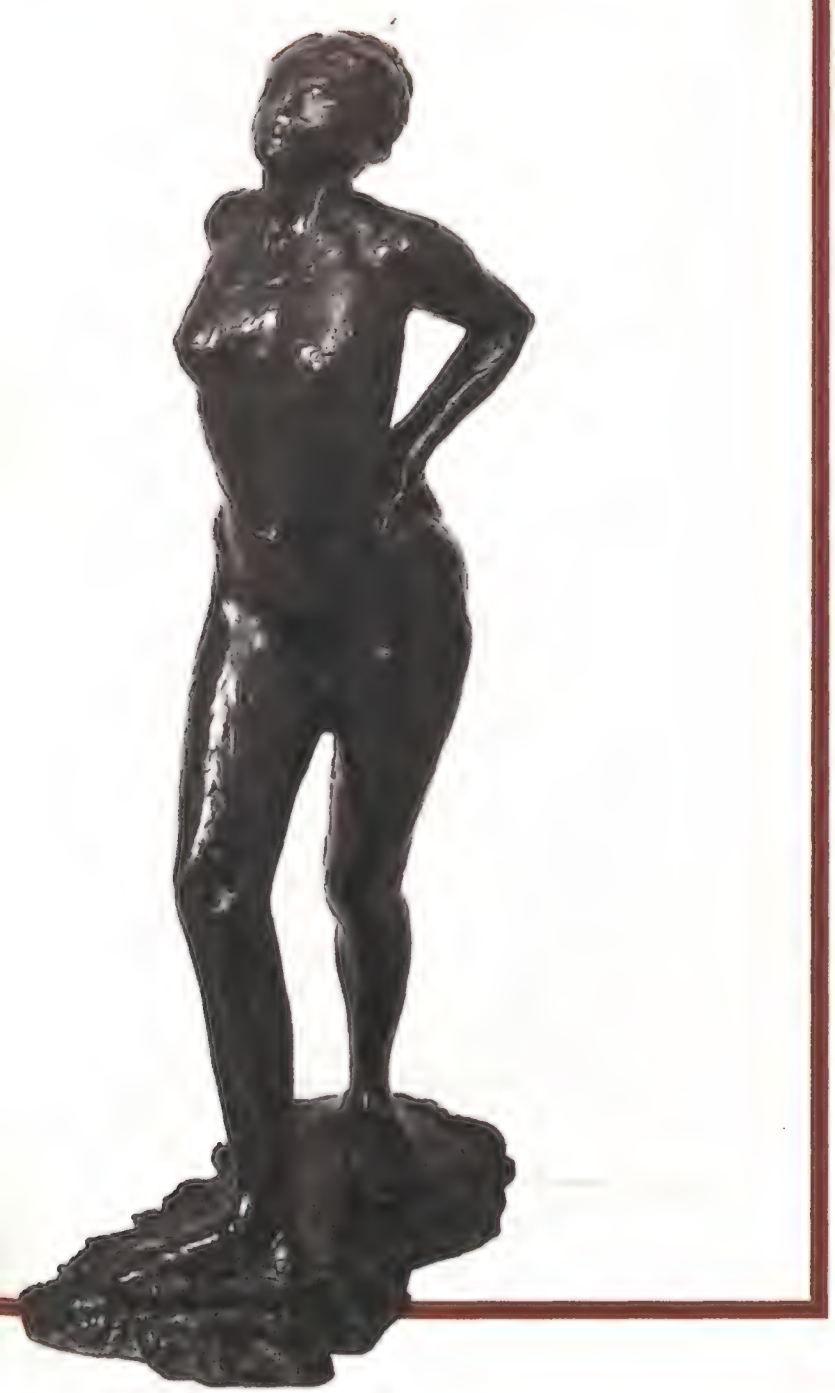
For work, Degas dressed in an old smock, like the one he wears in the self-portrait. Up in the studio, he adopted the persona of the reclusive artist, moody and stubborn. "Behind his studio door," writes Kendall, "he could sink into melancholic torpor, worrying about his eyesight or brooding on death, grumbling at his models or simply staring into the fire." In his earlier days, Degas had studied his subjects in the real world, frequenting the racetrack, the café-concert and the opera for inspiration. But by this time his pictures were nearly always contrivances of the studio, based on his memories. Amid the clutter, a small section of the room would be cleared for the model and the props. By arranging a zinc tub and a chair, he created an intimate bath. A model in a tutu, with a drape as a curtain, became a dancer.

Females, often nude, were to form the basis for Degas's art until the end of his life. Indeed, apart from several dozen landscapes done in the 1890s, virtually all of Degas's late pictures are of women, usually of ballerinas and of bathers drying themselves. On the few occasions when he made landscapes, he sometimes could not resist including the hidden image of a reclining figure in the scene. Look carefully at *Steep Coast* of the early 1890s (pp. 98-99) and the two tall hills on the left emerge as her thighs, two conical hillocks in the center are her breasts, and her head lies by the coast, with flowing auburn hair cascading down into the water and forming the cliff (the image of the woman can be seen more easily if the picture is turned onto its left side).

Degas's obsession with the female body has been a cause for considerable comment. Here was an elderly, unmarried man working with nude models in the privacy of his studio, producing pictures that appeared

Three works, in three different media, illustrate the intensity with which Degas studied all aspects of a single pose. The lead figure in *Two Dancers*, the pastel above, also appears in the charcoal study and is depicted again in the bronze sculpture. The sculpture—originally a wax study that Degas created as an aid to understanding the pose, rather than for exhibition—was cast in bronze only after he died.

The Art Institute of Chicago; Private Collection; Tate Gallery, London



voyeuristic. As he once claimed to his artist friend Georges Jeanniot: "Women can never forgive me; they hate me, they feel that I am disarming them. I show them without their coquetry." The women look very ordinary, not glamorized, and it is noticeable that his models appear to age as the artist grew older.

Degas's images still evoke strong reactions. To some, the pictures are disquieting. The artist seems to be invading the privacy of his models and exploiting their vulnerability. Other viewers have a quite different response, seeing the images as a celebration of the human form. Kendall takes this latter view, pointing out that the women are often depicted from behind, almost modestly, and he believes the pictures are among the "most prudish nudes in Western art."

Degas's own sexuality remains a mystery. He never married, nor had a mistress, but he did keep a circle of female friends and confidants. He invariably treated his models with propriety, and they seem to have felt at ease with him. On one occasion, when Degas was 75, he began humming a tune and ended up jokingly dancing around the studio with his model Pauline, who was naked except for a pair of slippers. Degas would probably be pleased that his private sexuality remains an enigma.

One of the most important achievements of the Chicago exhibition is the telling way it explores Degas's techniques. In later years he turned from oil paints to drawing with charcoal and pastels, with which he conjured up what he once described as "orgies of color." An examination of his pictures has revealed how he built up a multiplicity of hues, often stabilizing a color by spraying on a fixative, thereby sealing the dusty pastel to prevent it from smudging. He then added another layer, and so on. The effect of building up these layers is to make his colors sing. According to Jean Sutherland Boggs, the Degas expert who masterminded the 1988-89 retrospective at the Metropolitan Museum of Art in New York, as the years went by the artist's "colors became stronger and harsher, his handling richer, and his line more brutal."

Until now little attention has been devoted to Degas's unusual choice of materials. He usually drew on tracing paper, which was generally shunned by other artists because of its fragility and lack of surface texture. For Degas, however, it suited the exploratory line of his drawing, allowing his charcoal and pastels to wander freely over the smooth surface. But the main reason for using tracing paper was to enable him to copy his images, a technique that became central to his art. The copy was never a simple replica, but a starting point for a new work. In the copy, the lines of a figure could be altered, perhaps by shifting the position of a leg or clothing a nude figure. The new version could be colored differently, giving an opportunity to explore the effect of a new combination of hues. A single figure could be incorporated into a larger composition.

A pair of pictures in the Chicago exhibition that demonstrate how Degas would color similar images to produce very different effects and emotions are *Dancers, Pink and Green* and the later *Blue Dancers*. Although painted in oils, they must have been based on the same sketch or related ones, most likely made on tracing paper and transferred to canvas. The spring-like atmosphere of the pink and green contrasts with the cooler tones of the blue. Using copies of images, the artist experimented with endless variations of color, producing stunning effects.

Another unusual aspect of Degas's way of working was his use of sculpture. Degas once described sculpture as a "blind man's trade," a comment that encouraged the view that failing eyesight had forced him to substitute modeling for painting. However, research suggests that Degas actually used his sculptures as an aid to assist his drawing. With wax, Degas would sculpt a figure from life. From this he would make a series of drawings, depicting the figure from various positions. For example, the sculpture *Grand Arabesque, Second Time* of the 1880s portrays a dancer in an outstretched pose that would have been very tiring for a model to hold for any length of time. But having completed the sculpture, the artist could create a series of drawings from the wax figure, viewed from different angles. One of these, done two decades later, is a rough charcoal sketch of the same dancer, seen from slightly above. Degas did not see his sculptures as independent works of art, and it was only after his death that the fragile waxes were rescued from his studio by family and friends and cast in bronze.

The use of tracing paper and sculptures enabled Degas to concentrate on pursuing a limited number of themes through hundreds of works. "It is essential to do the same subject over again, ten times, a hundred times," he once advised his friend Paul-Albert Bartholomé. Hardly any of his pictures are dated, and his habit of constantly returning to earlier images adds to the difficulty of determining when they were done (some of the works in the Chicago exhibition are dated to a ten-year period). It was long assumed that Degas made few pictures after 1900 and only a small number after 1905, when he was 70. But recent research suggests that some works previously dated to the 1890s were done in the early years of the 20th century. For example, Kendall has redated the pastel *Seated Bather Drying her Neck*, ascribed to 1894 in the standard Degas catalogue raisonné, to 1905-10. He argues that the densely textured execution and the swaths of brilliant color, which create an almost abstract design, are typical of the artist's final period.

As the years went by and Degas's artistic reputation continued to rise, word spread that he had become a fierce curmudgeon, rudely turning away visitors from his studio. On one notorious occasion, recorded by Sickert, several people he did not know arrived at his door and politely inquired if they were disturbing him. Degas shouted out the single word "*Beaucoup!*" ("Very much!"), leading to their sudden departure. But after recounting the incident, Sickert added his own sympathetic comment: "If the greatest painter of the age, who happens not to keep a footman, may not, in broad daylight, say that he is occupied, when, in God's name, is it proposed that he should paint?" Degas himself encouraged stories about his antisocial behavior, probably in an effort to protect his privacy. His legendary reclusiveness was much exaggerated.

Although Degas once described commercial galleries as brothels, his pictures sold well through some of the leading Parisian dealers of the time. However, it is often said that the works were rarely exhibited, and he was thought to have had only two one-man shows in his lifetime. These were in 1892 at the Durand-Ruel gallery in Paris and in 1911 at the Fogg Art Museum at Harvard. But evidence has now been discovered of a third one-man show at Durand-Ruel in New York in 1901. Several other more informal displays were held, including an important one at Durand-Ruel in Paris in 1896, which was almost a mini-retrospective. Kendall concludes that his work was widely seen, both in the studio and at dealers, and that "the inaccessibility of Degas's art is one of the flimsiest artistic myths."

If one has to date the end of Degas's creative career, it probably occurred with his move from Rue Victor Massé. In 1912 the owners of the building decided to de-

National Gallery, London

An intimate scene in opulent color, Degas's *Combing the Hair*, c. 1892-96, was once owned by Henri Matisse.

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molish it, and the 78-year-old artist was forced to move out, finding accommodation two blocks away in the Boulevard de Clichy. Understandably, the move depressed him, and his health was fading fast. His eyesight had already deteriorated, making him intolerant of bright sunshine and forcing him to wear dark glasses outdoors. By 1917 he had become very weak, and the sculptor Paul Paulin recorded after a visit: "He dreams, he eats, he sleeps." On September 27 Degas, age 83, died of cerebral congestion. France was at war when a group of a hundred colleagues assembled for his funeral. The American painter Mary Cassatt recorded in a letter: "We buried him on Saturday, a beautiful sunshine, a little crowd of friends and admirers, all very quiet and peaceful in the midst of this dreadful upheaval of which he was barely conscious."

Kendall believes that Degas played a decisive role in the development of 20th-century art, an influence that is explored in a separate display of prints and drawings at the Art Institute of Chicago, "Edgar Degas: Passing on the Tradition" (through January 26, 1997). It is fascinating to speculate on the influence that the elderly Degas exerted on the youngest generation of Parisian artists. In 1903, the 22-year-old Georges Rouault developed a friendship with Degas, and he was soon inspired by the master's dancers, tackling the subject with an expressionistic verve. Although it is not known if they met, Henri Matisse knew Degas's work. A few years after the death of Degas, he bought *Combing the Hair*, a picture whose powerful reds prefigure some of Matisse's own pictures. In 1902 the 20-year-old Picasso exhibited at a gallery at 25 Rue Victor Massé, but although he and Degas must have known each other's art and shared many acquaintances in common, it remains uncertain if they were in personal contact. Picasso's tribute came nearly 70 years later when he incorporated the smartly dressed figure of Degas among female nudes in dozens of etchings of brothel scenes. As Kendall sees it, "Degas and Picasso stand back-to-back at the turn of the century, like two sides of the modernist coin."

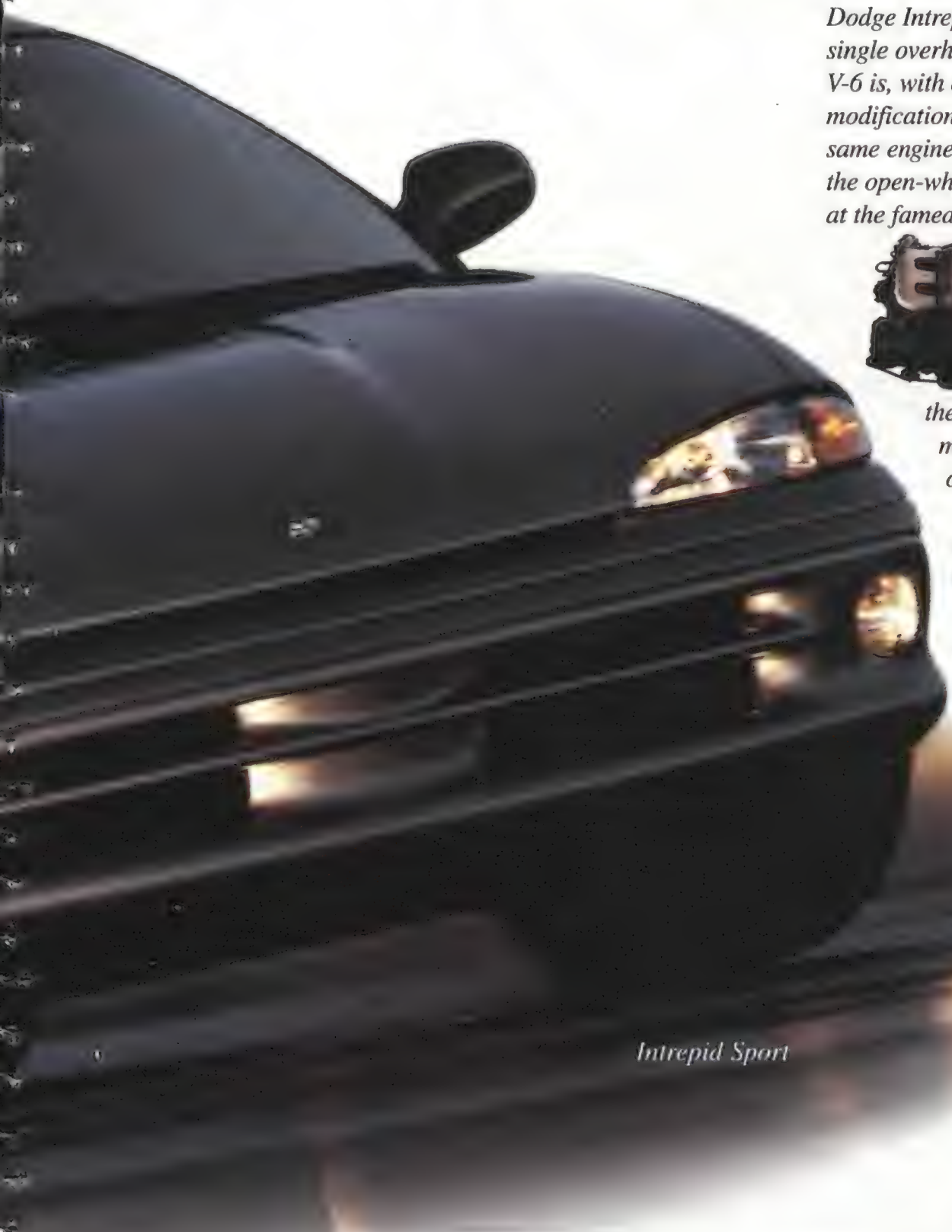
Among Degas's own generation, Pierre-Auguste Renoir stands out as the artist with the greatest understanding of his work. Renoir once told the dealer Ambroise Vollard, "If Degas had died at 50, he would have been remembered as an excellent painter, no more: it is after his 50th year that his work broadened out and that he really becomes Degas." Until recently, this view would have been regarded as heresy by most admirers of Edgar Degas's Impressionist work, but the Chicago exhibition confirms the truth of Renoir's insight.

By 1899, when he created the pastel *Russian Dancers*, Degas had total mastery of the human body in motion.

Mrs. Alex Lewyt

It's true, t
does tend

ne engine to race a bit.



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Close encounters with

an ancient world

With their enigmatic faces and staring, bitumen-accented eyes, they look like aliens from some other world, and in a way, they are, for they have come to us from across nine millennia. The figures, two full-length statues and a double-headed bust, each about 3½ feet tall, are from a cache discovered in 1985 after a bulldozer cutting a road in Jordan exposed an ancient archaeological site. Broken into thousands of fragments, the figures were far too delicate to be excavated on the site, and so the entire block of earth in which they were entombed was dug up and shipped to the Smithsonian's Conservation Analytical Laboratory. There, in a process spanning a decade, conservators painstakingly reassembled them. They are now on display at the Arthur M. Sackler Gallery.

Of the artists who made them, we know that they lived by farming, as well as hunting and gathering. They employed advanced Stone Age tools and were technically adept at making and working with the lime plaster from which the statues are fashioned. And the figures themselves? Perhaps they represented ancestors, or heroes, or gods or goddesses from some spirit world. We only know that after 9,000 years, their haunting faces, like archetypal figures from our collective past, have the power to speak to us still.

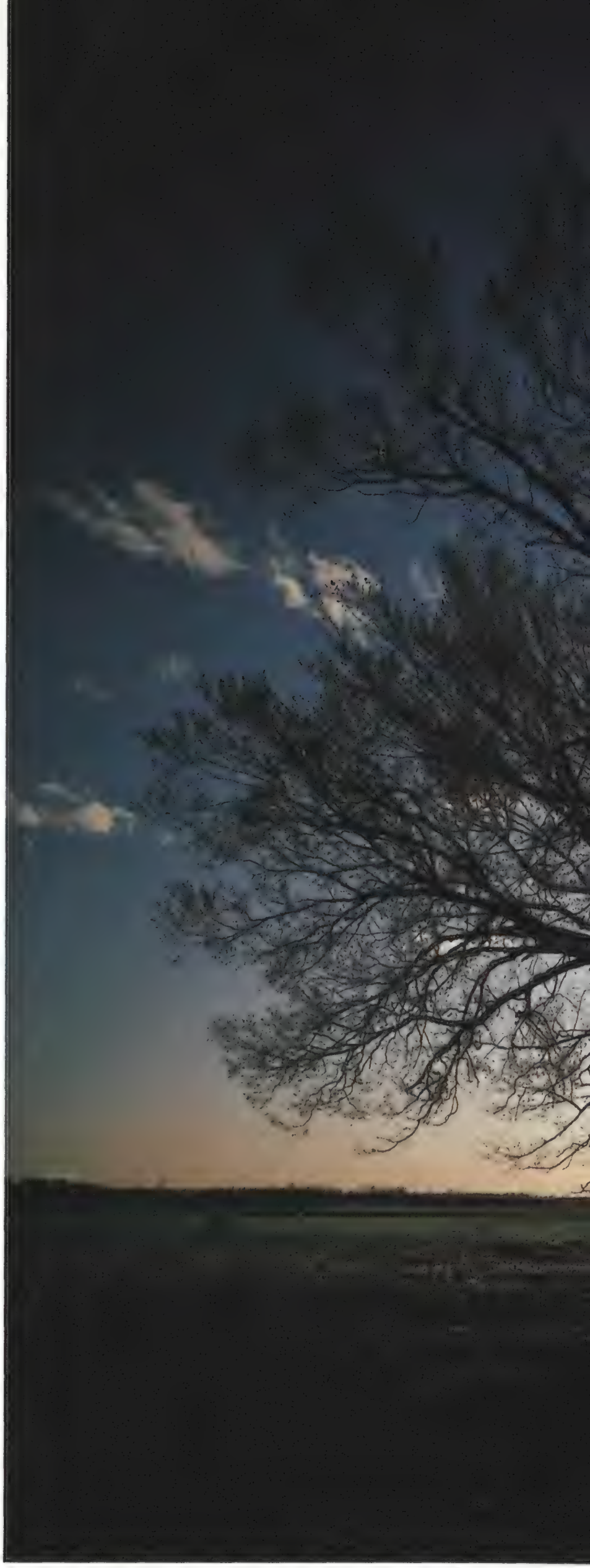
By Bil Gilbert

To be a champion, a tree must measure up to high standards

If it is tall, wide and thick enough, it might qualify for listing on the National Register of Big Trees—but first someone has to find it

One Thing Leads to Another Department: not long ago, I spent several weeks following the original route of the Oregon Trail. In north-central Kansas, I came to the place where wagon trains once forded the steep, slippery-banked Vermillion River, now crossed by a narrow country bridge. I saw a grassy pull-off area at the west end of the bridge and, upstream from it, a huge American elm. Walking over to take a closer look at the tree, I found a plaque which declared that it was certified by the American Forestry Association as a "national champion." Having spent a lot of time with people who grow, cut and hug trees, I had been casually aware for some 50 years that there was a register of the biggest ones. After accidentally discovering the reigning elm, I decided to become better acquainted with other champions.

I began my quest at the headquarters of the Washington, D.C. association, which is now known simply as American Forests. Deborah Gangloff, executive vice president, is in charge of the National Register of Big Trees. On her office wall is a photograph of the Kansas elm. She told me that it ranks among her favorites because it's one of a handful of big, old (approximately 125 years) members of this species that have survived the Dutch elm epidemic. It also nicely illustrates some of the aims and accomplishments of the big-tree program.



Plaque identifying it as a national champion stands beside hardy survivor of Dutch elm epidemic in Kansas.

The elm was formally measured and declared the biggest of its kind in 1979. In that same year, the Pottawatomie County highway department intended to do some road and bridge work on the site and had obtained an easement from the owner of the land where the elm stands. When it was learned that construction involved cutting down the newly certified national champion, a statewide hullabaloo ensued. The highway people backed off, and the landowner gave a 1½-acre plot surrounding the tree to the state to manage as a preserve for as long as the elm lives. So what I had first mistaken as an informal parking place is actually The (as in only) Kansas State Forest.

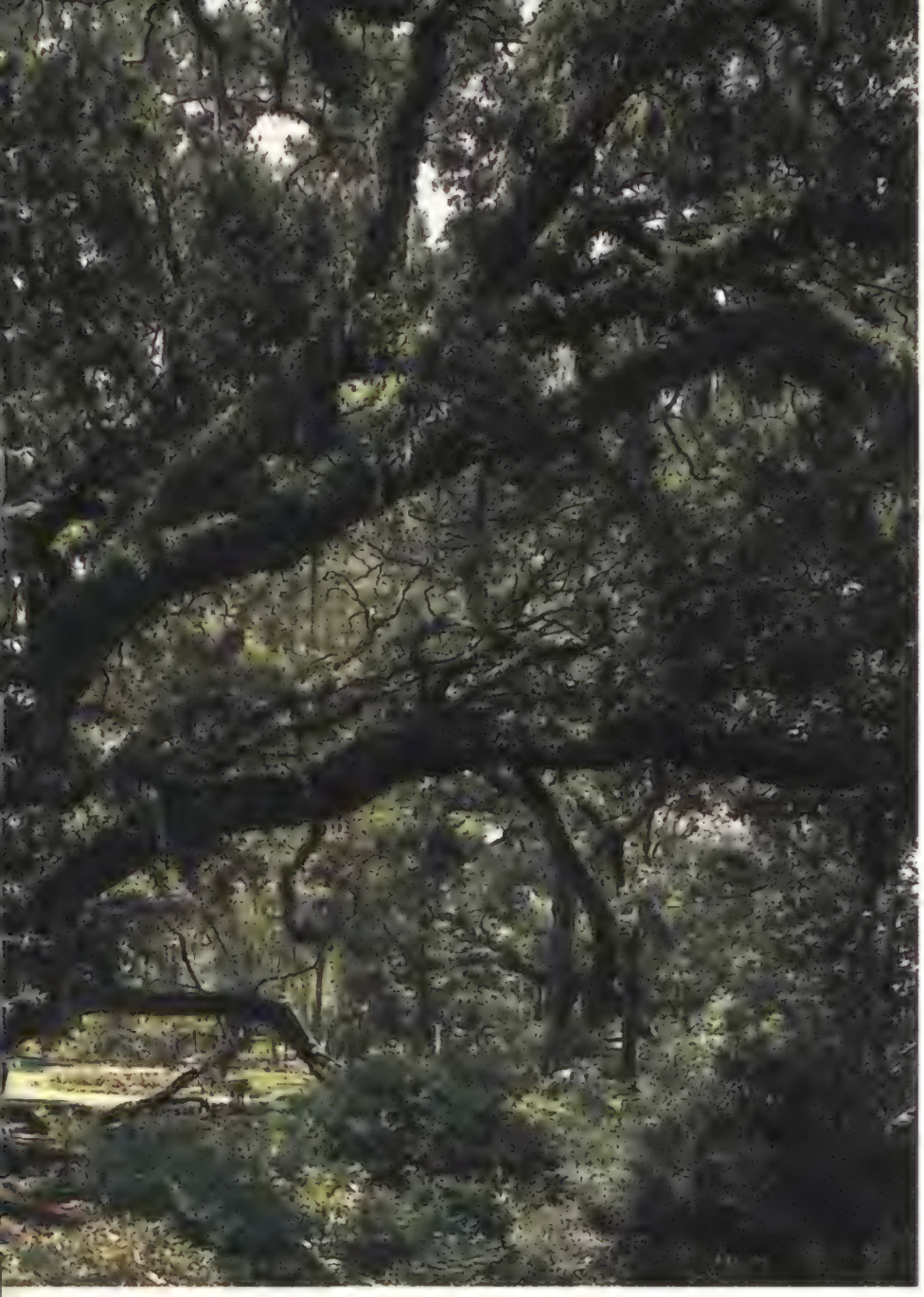
Being designated a national champion by American Forests does not confer any special legal protection, but as in the Kansas case, it does give a tree a lot of clout in the court of public opinion. Furthermore, says Gangloff, individual champions call favorable attention to trees in general, making people more aware of their ecological, esthetic and historic merits. This has been a principal objective of the forestry organization since its founding in 1875.

The initial register was published in 1940 and listed 75 species. Most of those trees were nominated by, and had long been known to, dendrologists. It was assumed that there were many larger specimens waiting to be found; the general public and tree professionals were encouraged to look for them. The response was, and continues to be, enthusiastic.

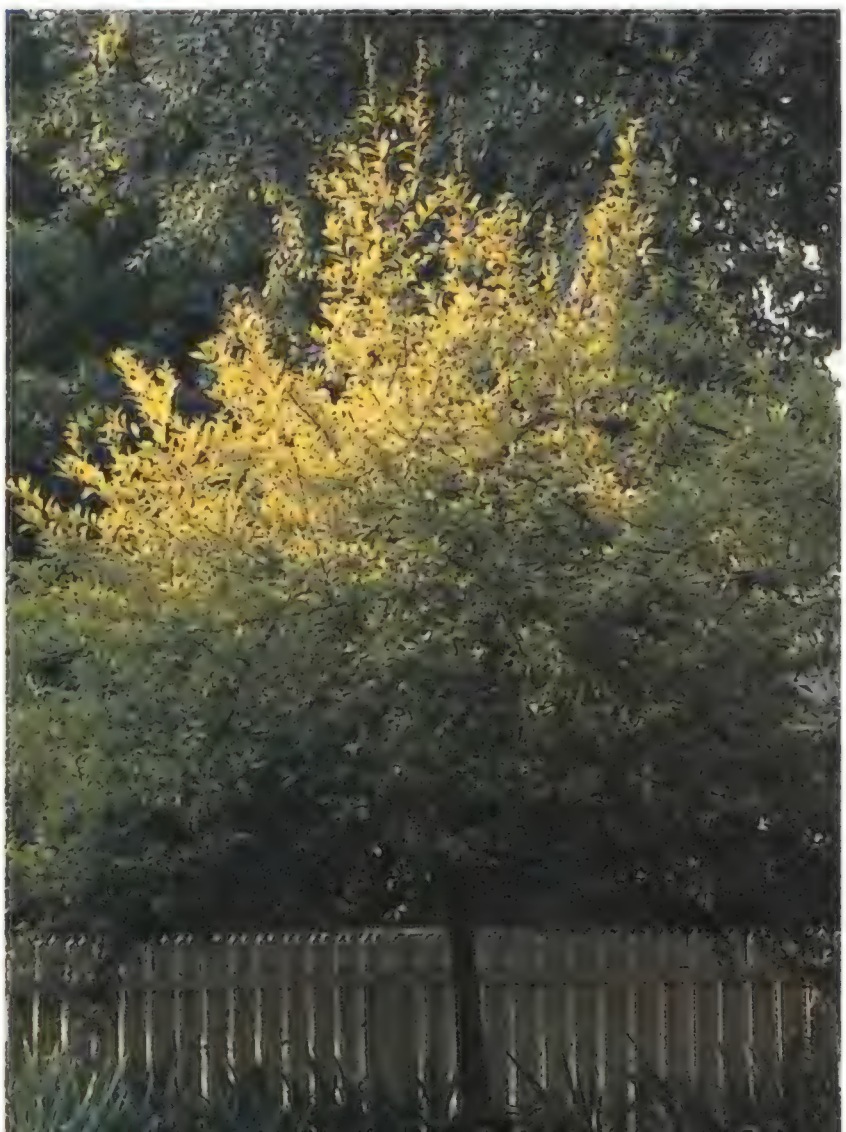
The National Register is updated every two years, and the current one lists champions for 703 species. Since the competition began, more than 1,500 people have nominated a tree large enough to appear on a register at least once. Untold numbers of others are beating around in the bush, hoping to locate a new champion. In consequence, only four trees have held their titles continuously since 1940. They are the General Sherman giant sequoia and the Bennett western juniper, both in California; the Jardine Rocky Mountain juniper in Utah; and the Wye Mills white oak in Maryland.

"The Checklist of U.S. Trees, Native and Naturalized," by Elbert L. Little jr., former chief dendrologist of the U.S. Forest Service, serves big-tree hunters in much the same way as the official baseball rulebook serves players of that game. To begin with, Little's checklist defines a tree—as distinguished from a vine or bush—as a woody perennial that has a stem or trunk at least 8 feet tall; a circumference of three or more inches at a point 4½ feet above the ground; and a "more or less definitely formed crown [branch spread] of foliage." Native trees are species thought to have been growing here prior to the ar-

Bil Gilbert recently wrote about the National Zoo's Think Tank and softball. He traveled the storied Oregon Trail in the May 1994 issue.



Live oak (above) near Lewisburg, Louisiana, stands 55 feet tall and has a 132-foot branch spread; Mojave yucca (left) thrives in a California desert; picket fence sets off May hawthorne (below) in Williamsburg, Virginia.



rival of Europeans. Naturalized ones got here later, assisted by people, but have become established and reproduce without benefit of cultivation.

The checklist recognizes 857 species of native and naturalized trees, but as noted, only 703 of them now have national champions. The other 154 do not, either because they are very rare or are difficult to distinguish in the field from closely related trees of the same genus. In the latter category, 12 species of hawthorns, 11 willows and 10 oaks do not have champions.

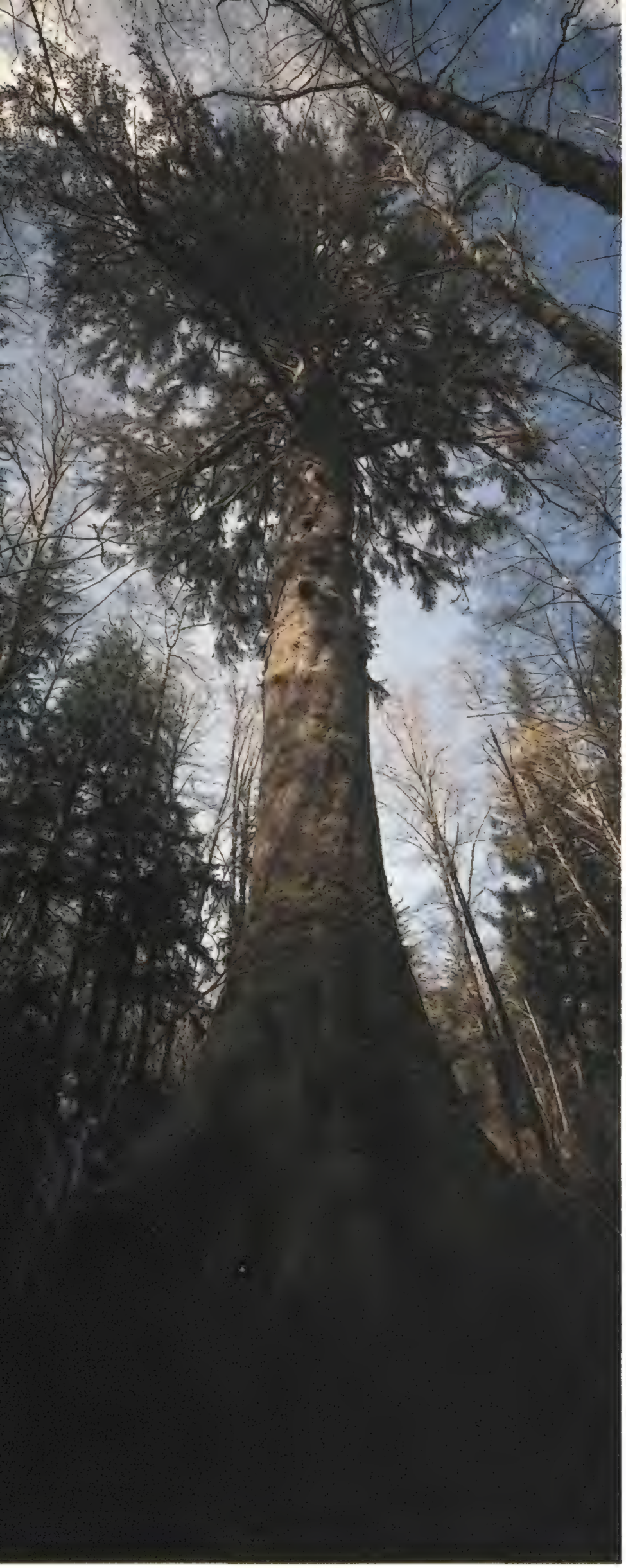
How big is big? It depends . . .

"Big" is a relative term and concept. Is, for example, a 7-foot, 220-pound basketball player bigger than a 6-foot, 300-pound one? To deal with such questions, the National Register competition is based on a multidimensional scoring table. For each foot of height, every 4 feet of branch spread and each inch of trunk circumference, a tree is credited with a point. So calculated, the biggest of all national champions is the General Sherman giant sequoia in the California Sierra Nevada. Being 275 feet tall, 998 inches in circumference with a spread of 107 feet, it has 1,300 points. The runner-up, with 1,183 points, is a coastal redwood in California's Prairie Creek Redwoods State Park. Though considerably taller, at 313 feet, the redwood is much inferior to the General Sherman in girth. The smallest national champion is an 8-foot-tall, 13-inch-round roughleaf velvetseed on Totten Key, Florida.

All but four states—Delaware, Massachusetts, North Dakota and Wyoming—have at least one national champion. Florida, with 146, has the most, but many of them are smallish, Caribbean species. Ecologically, commercially and politically, as well as physically, trees are bigger in the Pacific Northwest than in any other part of the country.

Among the 150 champions growing in Washington, Oregon and Northern California are eight of the top ten point scorers on the National Register. Basically this is because of favorable environment, but another factor also comes into play. There is a zoological witticism to the effect that the range of most animals coincides with the range of graduate students studying them. A similar overlap holds true with champion trees. Throughout the country, clusters of them invariably indicate the areas that have been worked hardest by champion big-tree hunters. In the Pacific Northwest, several of these serious seekers have become legends.

The first one I met, Robert Van Pelt of Seattle, was then a graduate student completing his doctoral studies in forestry at the University of Washington. He was also the state coordinator—an unpaid, labor-of-love job—for American Forests' big-tree program. Prior to 1987, when Van Pelt took this then-unfilled position, Wash-



Sitka spruce in Seaside, Oregon, shares championship honors with a giant in Olympic National Forest.

ington had only 13 national champions—a poor showing for such an arboreally advantaged place. Now it has 44, and 25 of them were nominated by Van Pelt.

In addition to his work with American Forests, Van Pelt publishes and updates a guide to big and interesting trees growing within the boundaries of the state of Washington. It now lists 1,350 specimens representing 869 native, naturalized or cultivated species. Theoretically, tree-hunting is an avocation, but it is practically a full-time second job for Van Pelt. He and others of his ilk invariably point out that information about the growth habits and habitats of the largest members of a species is useful to silviculturists, nursery owners and landscapers. After this rationalization is entered and accepted, Van Pelt adds that he hunts big trees because he loves them. "Seeing a fully grown specimen, knowing it is the largest one of its kind, is an unmatched experience," he tells me. Pressed further, he admits that the prospect of being the first to nominate a national champion gets his competitive juices flowing.

The decline of the mighty chestnut

Van Pelt searches many of the Western states and altogether has 35 trees on the National Register. One of them is the tallest American chestnut, which he nominated in 1993. It grows above the North Fork of the Stillaguamish River, 40 miles north of Seattle. On our first morning together, we went to see it because I have a special historical and sentimental interest in this species.

At the beginning of this century, 25 percent of the deciduous trees east of the Mississippi were American chestnuts. As habitat makers, food suppliers and timber producers, they were arguably the most influential of native hardwoods. In 1904, a shipment of botanical specimens from Japan was received in New York. It contained a fungus, *Endothia parasitica.* The organism fatally attacked native chestnuts, which had no natural immunity. The blight spread like biological wildfire, leaving behind millions of dead chestnuts and profoundly altering ecosystems and landscapes. By 1950, only a few hundred mature chestnuts were still living in their traditional range (SMITHSONIAN, June 1979).

When I was growing up in the early 1930s, the blight had not yet reached Kalamazoo, Michigan. Many of the trees grew in the city and produced nuts, which members of my set carried in our pockets for the purpose of throwing at each other. In the summer, my family lived at a cottage on a lake ten miles south of Kalamazoo. Chestnuts did not normally grow in that sandy area. One day I brought several nuts from town and planted them in the cottage yard. One of them sprouted and was thereafter watered and fertilized. Presumably because it was isolated from others of its kind, "my" tree continued to thrive even after the blight had killed all the chest-

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The only thing this spreading chestnut tree in Cicero, Washington, lacks is Longfellow's village smithy. It's the tallest American chestnut on record, but there is one in Carson, Washington, with an even larger spread.

nuts in Kalamazoo. A visiting forester from Michigan State University told my mother—then widowed and living year-round at the lake—that "her" tree was one of the half-dozen biggest chestnuts left in the state.

But fungus spores are ubiquitous. In the mid-1980s, some found this tree. Cankers appeared on it, and the big limbs began to die. We fed, pruned and doctored, but this only delayed the inevitable. My mother—who was born in 1901—said she didn't much want to be around if the chestnut wasn't and reckoned they would leave at about the same time. They did. She died in 1994, and soon thereafter the new owners of the property removed the skeletal remains of the tree.

Virtually all of the big, wild chestnuts that survive today are in the Pacific Northwest, which the fungus never reached. Technically they are exotics in the region, having been brought there and planted by early settlers before the blight appeared in the East. The reigning national champion stands, as it has for more than a century, Van Pelt estimates, at the edge of a hayfield. It is 106 feet tall and 20 feet in girth, with a branch spread of 101 feet. There were once many larger ones, but this is still a fine figure of a tree, the most impressive chestnut I have ever seen or anybody is likely to see in the foreseeable future.

Wild, wet and mild of climate, the Olympic Peninsula of Washington is God's own arboretum, or close to it. In its evergreen forests are ten national champions and many other, only minimally smaller, cedars, firs, hemlocks and spruces. Van Pelt has hunted assiduously among them for more than a decade. In terms of size, his personal best is a Sitka spruce, which he located in 1987 on the east side of Lake Quinault. Standing 191 feet tall and measuring nearly 60 feet around, it is worth 922 register points. That makes it the fifth-largest tree in the country, but on the National Register it is listed as a cochampion because of having become a principal in what big-tree hunters call "the spruce war."

Maynard Drawson, a retired barber in Salem, Oregon, is one of the most veteran and competitive of big-tree hunters. Having bantered with two generations of politicians at his shop near the State Capitol, he has also accumulated considerable clout, which he is not loathe to use when promoting avocational projects.

In 1973, Drawson measured a 206-foot-tall Sitka spruce growing near Seaside, a resort community on the Oregon coast. Credited with 902 points, it was declared a national champion. A parking lot and a boardwalk were built around the tree, which is advertised by the local tourist bureau as one of the special attractions of

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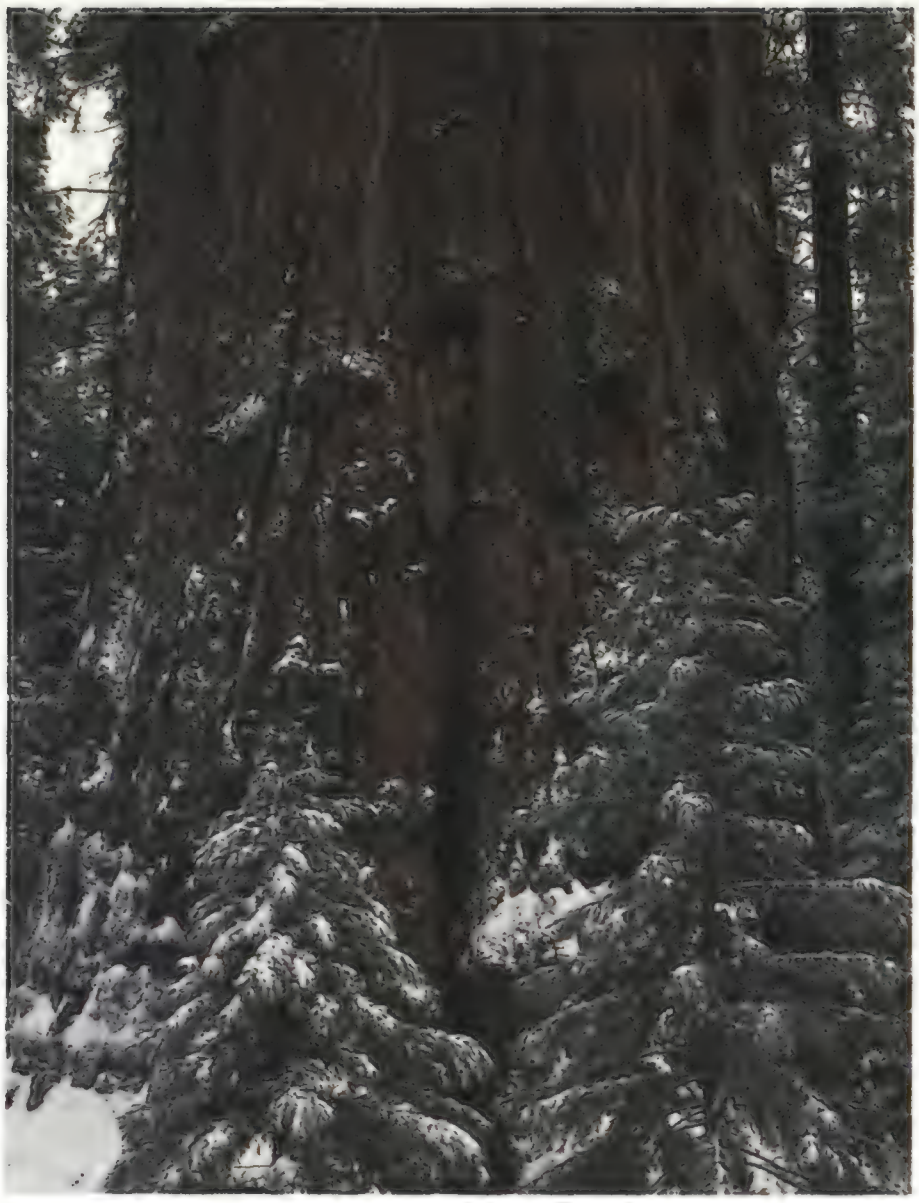

More than 80 feet around, the trunk of California's General Sherman giant sequoia dwarfs nearby white firs.

the area. The news that Van Pelt had found a 922-point Sitka caused consternation. Drawson went north to examine the challenger and reported that its extraordinary girth—which gave the shorter Washington tree its 20-point advantage—was improperly inflated by ridges of root extending up the trunk. Van Pelt insisted that the circumference figure was legitimate and accurate. The two men measured the trees together but could not agree and still do not. Drawson got a number of public officials involved in the dispute, which eventually reached American Forests headquarters. There, Deborah Gangloff made an inspired decision, decreeing that trees of this species within 20 points of each other would be regarded as cochampions.

Maynard Drawson has developed a knack, he says, for seeing trees rather than forests. Since he started looking for them in 1960, he has found 50 national champions, 4 of which are still titleholders. Among them is a 158-foot-tall, 260-year-old black cottonwood standing above bottomland thickets in the Willamette Valley. In some respects, it is more impressive than his Sitka spruce, since cottonwoods typically break up before they reach such a height and age.

Barbara Rupers, also a Salem resident, has had only one national champion, but it belongs to her as none of Drawson's or Van Pelt's do to them. It is a 43-point western dogwood, the smallest champion that I encountered. In 1963, Rupers became the first female graduate of the School of Forestry at the University of Idaho. At that time, she says, it was practically impossible for a woman to find a job in forestry, so she gave up that profession and became a high school math and science teacher. She and her husband, Tom, purchased a farm some 20 miles west of Salem and established a filbert orchard, which Tom, a former forester, works on a full-time basis.

In 1987, Barbara Rupers was poking through some thickets along a small stream that cuts through a wooded area of the filbert farm. She came upon what she recognized as a really big, multistemmed western dogwood. Measurement proved it to be a winner, and with another of this species, a 47-point tree in Washington, it was declared a champ. It still had not been dethroned late in 1995 when Rupers and I crawled on hands and knees through the streamside underbrush to see her fine little big tree. But unbeknownst to us, the ubiquitous Robert Van Pelt had already located a 66-point western dogwood, which was to displace Rupers' tree on the 1996-97 National Register.

Among the very big trees of the Pacific Northwest, my own personal favorite is a Douglas fir growing deep in an ancient forest east of Coos Bay, Oregon, on a tract owned by the Bureau of Land Management (BLM). It is not the tallest tree in the country—a few redwoods are in the 350-foot range—but at 329 feet it is the tallest of all national champions.

In 1980, Hank Williams and his brother, Archie jr., were elk hunting in this trackless, temperate jungle along Brummet Creek. Both were professional loggers and veteran woodsmen. They became separated. Thrashing about, Hank came upon the biggest fir he had ever seen.

The quest to find an impressive memorial

Eventually the Williams brothers found their way out of the jungle. Time passed. In 1988, Archie was killed in a logging accident. Mourning his brother, Hank decided to look for the tree he had come across eight years before and, if it was the biggest of all Douglas firs, as he suspected, have it recognized as such and dedicated to Archie's memory. Twice he made unsuccessful searches. The next time, he told me recently, "I packed grub and a sleeping bag and said I was going to stay in the woods until I found that sucker again."

The third time was the charm. On his way out after finding the tree, Williams flagged his route with surveyor's tape. Later he returned with an Oregon state forester who made the measurements. After it was certified as the champion, the BLM roughed out a narrow trail from the nearest logging road to the tree.

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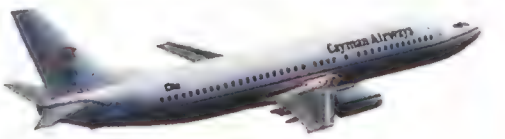

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"Those who know us, love us."

Cochampion eastern redcedar shades a cemetery in Coffee County, Georgia. Its counterpart is growing in a cemetery in Texas' Angelina National Forest. The Georgia tree is fuller; the one in Texas is much taller.

The expression "cathedral-like" is overused in arboreal commentaries, but it is the best description I can think of for the ancient evergreen forest through which this trail passes. At the end of it is the giant fir, a plain bench and a plaque explaining the circumstances of the tree's discovery. No one I know or have heard of has a more impressive memorial than does Archie Williams jr. It is apt to be there for a long time. Healthy and vigorous, the tree is thought to be about 700 years old, in early middle age. Barring a freak mistake or an act of vandalism, it is unlikely anyone will cut it down.

The majority of national-champion trees are found not in the wilderness but, rather, at botanical preserves in well-settled and often urban areas. Some of these are formal arboretums, but more are ad hoc ones originally created for other purposes. A blackhaw at George Washington's birthplace, Wakefield, in Virginia, an Osage-orange at Patrick Henry's farm home in Red Hill, Virginia, and two trees at the Alamo in Texas, a catclaw acacia and a lignumvitae, are all national champions. The cochampion eastern redcedars are in old cemeteries, one in Georgia, the other in Texas. The biggest white ash is the pride and promotional joy of Tony's Lobster and Steakhouse in Sparkill, New York.

Then there is the biggest Jerusalem-thorn, sometimes called the Mexican paloverde. It may have been viewed, subliminally, by more people than any other tree in the country or perhaps the world. A little more than 30 feet tall in its prime, it was already a fair-sized specimen in 1939, when the surrounding property in the high desert near Tucson, Arizona, was transformed into a permanent outdoor movie set complete with board sidewalks, hitching posts and saloon fronts. Parts of some 300 films, mostly Westerns, were produced in this mock frontier village, which is now known as Old Tucson. Its Jerusalem-thorn was never stout enough to be a hanging tree, but innumerable robberies, fistfights and shoot-outs were staged around it.

This tree appears in the current National Register, but it is literally a late champion. It looked to be very sick when I saw it, and early this year tree doctors were brought in to examine it. They said it was on its last legs and might, at any moment, fall on an actor or a tourist. So it was cut down. But as long as film is preserved and shoot-'em-up epics enjoyed, this tree, like Tom Mix, John Wayne and the great horse Silver, will live on.

Arizona is not popularly associated with trees big or small. In fact, it has 37 national champions, three times more than can be found in all of the six New England states. Diverse of climate and terrain, it is inhabited by a number of species that either independently pioneered into it or were brought there from Mexico and Central America. It also has Robert Zahner, a onetime professor of forest ecology at the University of Michigan. In that capacity, he often made professional visits to the Tree Ring Laboratory, a research facility at the University of

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Hank Williams can't even begin to reach around the fir he found and dedicated to his late brother, Archie.

Arizona. After retirement, Zahner and his wife, Glenda, a biologist, settled a few miles from Old Tucson. In 1993, he volunteered to become the state coordinator of the American Forests big-tree program. Arizona now has 15 more champion trees than it did three years ago.

I had spent 1971 in the Huachuca Mountains, south of Tucson, studying coatimundis, tropical mammals closely related to raccoons. This is when and where I first became acquainted with Emory oaks, which greatly enhance the habitat, food supply and beauty of those parts. Following Robert Zahner's directions, I went back to the Huachucas and located the champion Emory in the northern foothills. It was in a grove of its own kind, above a dry wash on the back end of an experimental ranch owned by the BLM.

Obviously, it is a matter of personal taste, but for me Emory oaks are the most stylish of native trees. They do not attain great heights but grow in open, orchard-like glades in which each tree has a chance to develop symmetrically. There are two champions, one in Arizona and the other in Colorado. The Arizona champ is only 53 feet tall, but its canopy spreads out 83 feet, some 30 feet more than that of the 329-foot-tall Douglas fir. The stiff leaves are glossy green throughout most of the year, but in the spring emerging new foliage gives these oaks a pinkish cast. The huge main limbs are regularly spaced, creating an open appearance and the impression that the trees have been thoughtfully tended for centuries by a master pruner. In a sense, they have been.

I have come to the point, as I am told others do, when I sometimes think about end places. I have considered a hemlock-shaded spring along the West Branch of the Susquehanna River; a hummock in a Michigan swamp; a rocky outcrop in the Blue Ridge over which migrating hawks fly low in October. But under a big Emory oak in the Huachucas would be a very decent place to go, finally, to earth.

Currently, 67 species of oaks have certified national champions. The biggest is a 163-foot-tall, 536-point valley oak near Covelo, California, but the most renowned is the aforementioned white oak in Wye Mills, Maryland. In 1939, a small state park was created around and named for this oak, which has been standing there since about 1540. A modest 79 feet tall, the tree is a champion because of its enormous (for this species) girth of more than 30 feet. This measurement is in part accounted for by a series of wart-like burls that protrude from the trunk. Local historians believe these deformities may be scar tissue that began forming when farmers who brought grain to a nearby mill, built in 1664, tied their teams to the already big oak, scoring and abrading it.

Almost certainly the Wye Mills white oak would be long gone if it were not so well cared for. It is regularly fed and pruned by tree surgeons, who periodically enter the hollow trunk to control fungi and decay. A maze of 200 steel cables supports the massive limbs, and a lightning rod is affixed to the top.

Following my encounter with that old elm in Kansas, I met up with about a hundred national champions, letting one big tree or big-tree hunter lead me to the next. But from the start, I knew which one would, or should, be the last. After first meeting Deborah Gangloff in Washington, I went through the National Register species by species. I found that the champion balsam fir was said to be near Fairfield, Pennsylvania, a village in the south-central part of the state and where I have lived for nearly 40 years. I never knew we had a champion tree hereabouts nor did anybody else I talked to in town.

After getting directions from Ray Brooks, a retired forester who first measured the fir 20 years ago, I went to see it. The tree is visible from a road I have driven many times and grows along a trout stream I occasionally walk. I am pretty sure that about 15 years ago I sat under this tree and ate a ham sandwich. It is 100 feet tall and more than 12 feet around, with an interesting, asymmetrical shape. While I was admiring it, our rural mail carrier, Kathy Kehres, stopped to see what I was doing. She was delighted to learn that we had a celebrity tree because the next day a newspaper reporter who wanted to write about rural mail carriers was going to ride along as she drove her route. "Now," Kehres said, "I'll have something to brag about. I'll act like I've always known this was a national champion."

White oak at Wye Mills, Maryland, owes its survival to loving care, a lightning rod and 200 support cables.

By Robert Shnayerson

Judgment at Nuremberg

Fifty years ago the trial of Nazi war criminals ended: the world had witnessed the rule of law invoked to punish unspeakable atrocities

On day two, the Nazi upper echelon sits in the dock. Hermann Göring (taking notes) will defend the Reich's record. Testimony about camps like Buchenwald (opposite) will be heard; in the end, ten men will hang.

In the war-shattered city of Nuremberg, 51 years ago, an eloquent American prosecutor named Robert H. Jackson opened what he called "the first trial in history for crimes against the peace of the world." The setting was the once lovely Bavarian city's hastily refurbished Palace of Justice, an SS prison only eight months before. In the dock were 21 captured Nazi leaders, notably the fat, cunning drug addict Hermann Göring.

Their alleged crimes, the ultimate in 20th-century depravity, included the mass murders of some six million Jews and millions of other human beings deemed "undesirable" by Adolf Hitler. "The wrongs which we seek to condemn and punish," said Robert Jackson, "have been so calculated, so malignant and so devastating, that civilization cannot tolerate their being ignored because it cannot survive their being repeated."

Here were satanic men like Ernst Kaltenbrunner, the scar-faced functionary second only to Heinrich Himmler in overseeing the death camps and the Nazi police apparatus; Alfred Rosenberg, cofounder of the Nazi

Death camp images, such as this one from Buchenwald, helped convict Ernst Kaltenbrunner, Himmler's deputy. Elie Wiesel, future chronicler of the Holocaust, is indicated by the arrow.

Party and chief theorist of anti-Semitism; and Hans Frank, the vicious and venal Nazi proconsul in Poland. At the time, many asked why such messengers of evil were to be allowed even one day in court, much less the 403 sessions they were about to undergo. It was a question that Jackson, on leave from his job as a Justice of the U.S. Supreme Court to prosecute this case, quickly addressed in his opening statement.

With the kind of moral clarity that marked American idealism at the time, Jackson declared, "That four great nations, flushed with victory and stung with injury stay the hand of vengeance and voluntarily submit their captive enemies to the judgment of the law is one of the most significant tributes that Power ever has paid to Reason. . . . The real complaining party at your bar is Civilization. . . . [It] asks whether law is so laggard as to be utterly helpless to deal with crimes of this magnitude."

So began, in November 1945, the century's most heroic attempt to achieve justice without vengeance—heroic because the victors of World War II had every reason to destroy the vanquished without pity. Heroic because they ultimately resisted the temptation to impose on the Germans what the Nazis had imposed on their victims—collective guilt. Instead, they granted their captives a presumption of innocence and conducted a ten-month trial to determine their personal responsibility.

Locked up in solitary cells each night, constantly guarded by American M.P.'s mindful of recent suicides among high-ranking Nazis, the defendants spent their days in a giant courtroom built for 400 spectators, listening to evidence drawn from 300,000 affidavits and meticulous German documents so voluminous they filled six freight cars. Nearly all were ready to acknowledge the horrific facts while cravenly assigning blame to others. (Göring, who died unrepentant, was the exception.) When it was all over in October 1946, and ten defendants had been hanged messily in the Palace of Justice's gymnasium, this first Nuremberg trial stood as the judicial Everest of those who hoped, as Jackson did, that the rule of law could punish, if not prevent, the atrocities of war.

The exercise of justice at Nurem-

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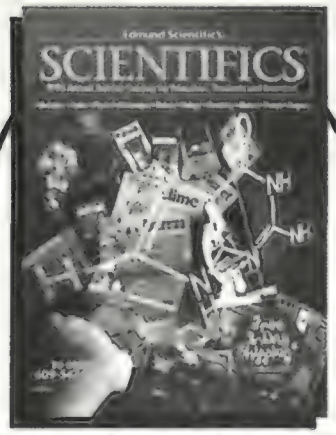

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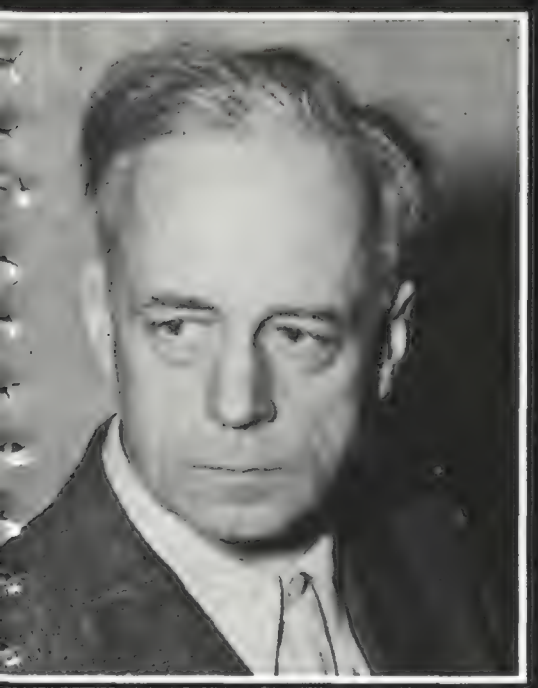
Among indicted (clockwise, from top left): Rudolf Hess, Hans Frank, Joachi
von Ribbentrop, Ernst Kaltenbrunner, Albert Speer, Hermann Göring.

berg reverberates across this century. And next month, on November 13 and 14, scholars will ponder the lessons of history at an international conference on the trials, sponsored by the Library of Congress and the U.S. Holocaust Memorial Museum.

How this trial, and the 12 that followed, came to be held is a story in itself. In April 1944, two Jews who escaped the Auschwitz death camp described its horrors to the world. They detailed Germany's technology of genocide, such as the camp's four new gas-and-burn machines, each designed to kill 2,000 prisoners at a time. They pinpointed a huge slave-labor operation at nearby Birkenau, run by Germany's fine old industrial names (I. G. Farben and Siemens among others), where Allied prisoners and kidnapped foreign laborers were fed so little and worked so hard that as many as one-third died every week. Their testimony paved the way to Nuremberg.

The Allied leaders had little trouble agreeing that German war crimes must be punished. But punished how? Treasury Secretary Henry Morgenthau jr. urged that all captured Nazi leaders be shot immediately, without trial, and that Germany be reduced to the status of an agricultural backwater. Secretary of War Henry Stimson thought dooming all Germans to a kind of national execution would not do. It violated the



Allied (if not Soviet) belief in the rule of law. It would deny postwar Germany a working economy and perhaps, ultimately, breed another war.

Roosevelt, who wanted to bring G.I.'s (and their votes) home promptly, sought a compromise between Morgenthau and Stimson. The man asked to find it was Murray Bernays, a 51-year-old lawyer turned wartime Army colonel in the Pentagon.

Immediately, a basic but legally complex question rose to the fore—what is a war crime, anyway? At the end of the 19th century, the increased killing power of modern weapons led to the various Hague and Geneva conventions, binding most great powers to treat civilians humanely, shun the killing of unarmed prisoners and avoid ultimate weapons, such as germ warfare, "calculated to cause unnecessary suffering." Such "laws of war" are quite frequently applied. They have saved thousands of lives. In combat the basic distinction between legitimate warfare and atrocities occurs when acts of violence exceed "military necessity."

Before Nuremberg, jurisdiction over war crimes was limited to each country's military courts. After World War I, when the victors accused 896 Germans of serious war crimes, demanding their surrender to Allied military courts, the Germans insisted on trying them and accepted a mere 12 cases. Three defendants never showed up; charges against three others were dropped; the remaining six got trivial sentences.

Bernays envisioned a different scenario: an international court that held individuals liable for crimes the world deemed crimes, even if their nation had approved or required those actions. The accused could not plead obedience to superiors. They would be held personally responsible.

Other big questions remained. One was how an international court trying war crimes could legally deal with crimes committed by the Nazis before the war. Another involved the sheer volume of guilt. The dreaded Schutzstaffel, or SS (in charge of intelligence, security and the extermination of undesirables), and other large Nazi organizations included hundreds of thousands of alleged war criminals. How could they possibly be tried individually? Bernays suggested putting Nazism and the entire Hitler era on trial as a giant criminal conspiracy. In a single stroke, this would create a kind of unified field theory of Nazi depravity, eliminating time constraints, allowing prosecution of war crimes and prewar crimes as well. He also suggested picking a handful of top Nazi defendants as representatives of key Nazi organiza-

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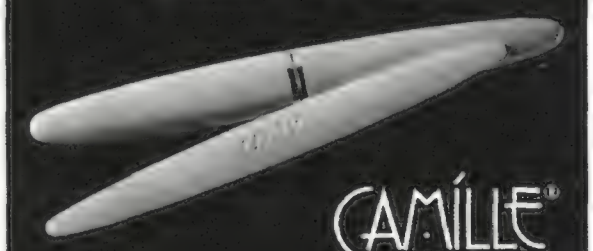

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tions like the SS. If the leaders were convicted, members of their organizations would automatically be deemed guilty. Result: few trials, many convictions and a devastating exposé of Nazi crimes.

Roosevelt promptly endorsed the plan, with one addition. The Nazis would be charged with the crime of waging "aggressive" war, or what the eventual indictments called "crimes against peace"—the first such charge in legal history.

Nobody was more enthusiastic about the strategy than Robert Jackson. Then 53, Jackson was a small-town lawyer from western New York with a gift for language. He had served in various posts in New Deal Washington before Roosevelt elevated him to the Supreme Court in 1941. By July 21, 1945, barely two months after Germany surrendered, Jackson had won President Truman's approval for a four-power International Military Tribunal and had persuaded the Allies to conduct it in Nuremberg.

A master list of 122 war criminals was put together, headed by Hermann Göring, the ranking Nazi survivor. (Hitler, Himmler and Goebbels were dead by their own hand. Martin Bormann, Hitler's secretary, had van-

U.S. prosecutor Robert Jackson stated that civilization itself sought justice.

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Prosecutor, later Senator, Thomas Dodd, holds evidence—shrunken head.

ished, never to be found.) Reichsmarschall Göring, a daring World War I ace, had not allowed defeat to tarnish his reputation for candor, cunning and gluttony. He had turned himself in at a weight of 264 pounds (he was 5 feet 6 inches tall). His entourage included a nurse, four aides, two chauffeurs and five cooks. His fingernails and toenails were painted bright red. His 16 monogrammed suitcases contained rare jewels, a red hatbox, frilly nightclothes and 20,000 paracodeine pills, a painkiller he had taken at the rate of about 40 pills a day. He managed to charm some of his captors to the point of almost forgetting his diabolism.

On August 8, 1945, the Charter of the International Military Tribunal (IMT), unveiled by the victorious Allies in London, declared aggressive war an international crime. The IMT charter was grounded in the idea that Nazism was a 26-year-long criminal conspiracy. Its aim: to build a war machine, satisfy Hitler's psychopathic hatred of Jews and turn Europe into a German empire. Judges representing the four powers (the United States, Great Britain, France and the Soviet Union), plus four alternates, were named. They were to take jurisdiction over high-ranking Nazis deemed per-

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sonally guilty of war crimes, conspiracy to commit war crimes, crimes against peace and crimes against humanity.

The 24 men named in the original indictment represented a wide spectrum of Germany's political-military-industrial complex. With Martin Bormann (tried in absentia), the list of those actually presented for trial was further reduced by two surprise events. Robert Ley, the alcoholic, Jew-baiting boss of the German Labor Front, which had governed the lives of 30 million German workers, hanged himself in his cell on the night of October 25. And, at the last moment, the prosecutors realized their key industrial defendant, the weapons maker Alfried Krupp, had not personally run his family's slave-labor factories until after the war began, giving him an easy defense against the prewar conspiracy charge. (Krupp was later sentenced to 12 years for war crimes, but he was released from prison in 1951.)

The trial of the remaining defendants began on the morning of November 20, 1945. In the refurbished courtroom, floodlights warmed the new green curtains and crimson chairs, illuminating the two rows of once fearsome Nazis sitting in the dock guarded by young American soldiers. Göring had shed 60 pounds during his six months of confinement, acquiring what novelist John Dos Passos, reporting for *Life*, called "that wizened look of a leaky balloon of a fat man who has lost a great deal of weight." Next to him in the front row were the ghostly Rudolf Hess, feigning amnesia; Joachim von Ribbentrop, Hitler's foreign minister; and Field Marshal Wilhelm Keitel, the Führer's Wehrmacht chief. Next in order of indictment came Ernst Kaltenbrunner (ill and absent for the first three weeks), Alfred Rosenberg and Hans Frank, who somehow thought his captors would spare his life when he handed over one of the trial's most damning documents—his 38-volume journal. (He would be sentenced to hang.)

Throughout that first day, as black-robed American, British and French judges and their two uniformed Soviet colleagues peered somberly from the bench, listening via earphones to translations in four languages, the prosecutors droned an almost boring litany of sickening crimes—shooting, torture, starvation, hanging—to which, in descending tones of indignation, from Göring downward, the accused each pleaded not guilty.

Hooded to conceal identity, witness looks for Gestapo among soldiers. But the tribunal declined to indict Germans just for being members of such a group.

The next morning, Robert Jackson opened the prosecution case on Count One, conspiracy to commit war crimes. "This war did not just happen," Jackson told the judges. The defendants' seizure of the German state, he continued, "their subjugation of the German people, their terrorism and extermination of dissident elements, their planning and waging of war . . . , their deliberate and planned criminality toward conquered peoples—all these are ends for which they acted in concert."

"We will not ask you to convict these men on the testimony of their foes," Jackson told the court. There was no need. Allied agents had found 47 crates of Alfred Rosenberg's files hidden in a 16th-century castle, 485 tons of diplomatic papers secreted in the Harz Mountains, and Göring's art loot and Luftwaffe records stashed in a salt mine in Obersalzberg.

One especially incriminating find—indispensable to the conspiracy theory—was the notes of Hitler aide Col. Friedrich Hossbach from a meeting between Hitler, Göring and other Nazis in Berlin on November 5, 1937. Hossbach quoted Hitler insisting that, as Europe's racially "purest" stock, the Germans were entitled to "more living space" in neighboring countries, which he planned to seize, he said, "no later than 1943-45."

During the opening weeks, the pace of the trial was slow. Most of the American prosecution team neither read nor understood German. What with translation gaffes, repetitions and monotone readings, the documentary evidence—reams of it—at times had judges yawning and the defendants themselves dozing off.

Of course, the banality of overdocu-

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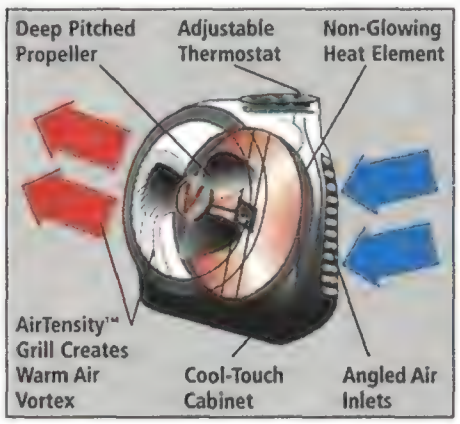

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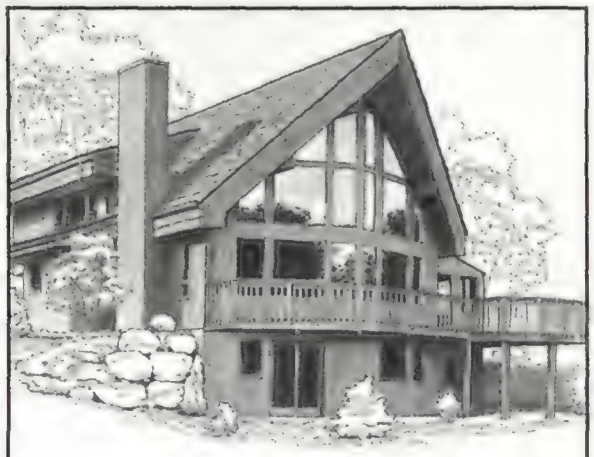

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mented evil did not soften the prosecution's gruesome narrative. And a month into the recitation of Hitler's prewar aggressions from the Rhineland to Austria to Czechoslovakia, the Americans suddenly animated the documents by showing films of Nazi horrors. One German soldier's home movie depicted his comrades in Warsaw, clubbing and kicking naked Jews. In one scene, an officer helped a battered young woman to her feet so that she could be knocked down again.

An American movie documented the liberation of concentration camps at Bergen-Belsen, Dachau and Buchenwald, filling the darkened courtroom with ghastly images of skeletal survivors, stacked cadavers and bulldozers shoveling victims into mass graves. In his cell that night, Hans Frank burst out: "To think we lived like kings and believed in that beast!" Göring was merely rueful. "It was such a good afternoon, too—" he said, "and then they showed that awful film, and it just spoiled everything."

Even when badly translated, Jackson's documents made a mesmerizing record of Hitler's appalling acts on the road to Armageddon. They revisited his rise to power as the people's choice in the depression year 1932. Billing himself as Germany's economic savior, the Führer immediately began spending so much on weapons that in six years, the treasury was almost empty. A diversion was called for.

Thrilling his admirers—millions of still worshipful Germans—Hitler bullied British and French leaders into selling out Czechoslovakia at the pusillanimous Munich conference in 1938 (SMITHSONIAN, October 1988). Next, Nazi thugs were unleashed on *Kristallnacht*, the "Night of Broken Glass" (November 9)—a nationwide campaign of anti-Semitic violence. Huge chunks of Jewish wealth wound up in Nazi pockets. Göring, the biggest thief, further demeaned his victims by ordering German Jews to pay the regime a "fine" of one billion marks ($400 million). As he explained it, "The Jew being ejected from the economy transfers his property to the state."

Hjalmar Schacht, then head of the Reichsbank, warned Hitler in January 1939 that his arms race was fueling runaway inflation. Hitler immediately

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fired Schacht and ordered new currency, largely backed by stolen Jewish property. Schacht, long a Hitler apologist, then began working secretly for U.S. intelligence and wound up at Dachau. Now, to his disgust, he sat in the Nuremberg dock.

According to trial documents, Hitler's profligacy helped propel his aggressions. By 1941, Hitler had made his suicidal decision to renege on the nonaggression pact signed with Stalin in 1939 and invade the Soviet Union. "What one does not have, but needs," he said, "one must conquer."

It began well, on June 22, 1941, and ended badly. By late 1942, with German casualties soaring at Stalingrad, Hitler had lost so many soldiers in Russia that he had to keep drafting German workers into the army, replacing them with foreign laborers, mainly French and Russian prisoners. In early 1943, with more than five million industrial slaves already toiling in Germany, the surrender at Stalingrad forced Hitler's manpower boss, Nuremberg defendant Fritz Sauckel, to kidnap 10,000 Russian civilians per day for work in Germany. Few survived longer than 18 months—a powerful incentive for Russians still at home to flee the kidnappers and join Soviet guerrillas in killing German troops.

Hitler's campaign to "Aryanize" Germany began before the war with the deliberate poisoning of incurably sick people and retarded children—labeled "garbage children." The regime's contempt for non-Aryan life conditioned millions of Germans to turn a blind eye to more and more epidemic evils—the death camps, the ghastly medical experiments, the relentless massacres of those Hitler called "Jews, Poles, and similar trash."

Listening to the facts, the almost incomprehensible facts, even the defendants longed for some answer to the overpowering question—why? Why did one of the world's most advanced nations descend to such acts so easily? So swiftly? The trial provided few answers. Hitler's truly diabolic achieve-

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ment, French prosecutor François de Menthon observed, was to revive "all the instincts of barbarism, repressed by centuries of civilization, but always present in men's innermost nature."

For weeks, the prosecution cited such acts as the use of Jewish prisoners as guinea pigs in military medical experiments to determine the limits of high-altitude flying by locking them in pressure chambers, slowly rupturing their lungs and skulls. How long downed German pilots could last in the ocean was determined by submerging prisoners in icy water until they died. To develop a blood-clotting chemical, the doctors shot and dismembered live prisoners to simulate battlefield injuries. Death did not end this abuse. A Czech doctor who spent four years imprisoned at Dachau, where he performed some 12,000 autopsies, told investigators that he was ordered to strip the skin off bodies. "It was cut into various sizes for use as saddles, riding breeches, gloves, house slippers, and ladies handbags. Tattooed skin was especially valued by SS men."

The scale of Hitler's madness was almost beyond imagination. The documents showed that after conquering Poland in 1939, he ordered the expulsion of nearly nine million Poles and Jews from Polish areas he annexed for his promised Nordic empire. The incoming colonists were "racially pure" ethnic Germans imported from places like the Italian Tirol. The SS duly began herding the exiles from their homes toward ethnic quarantine in a 39,000-square-mile cul-de-sac near Warsaw. Opposition grew; progress slowed. In righteous rage, the SS unleashed hundreds of *Einsatzgruppen*—killer packs assigned to spread terror by looting, shooting and slaughtering without restraint. Thereafter, the SS action groups murdered and plundered behind the German Army as it advanced eastward.

By January 1946, prosecutor Jackson was at last animating his documents with live witnesses. The first was a stunner. Otto Ohlendorf, blond and short, looked like the choirboy next door. In fact he was 38, a fanatic anti-Semite

Austere cells, equipped with doors slitted to permit 24-hour observation, were supposedly suicide-proof—Göring and Robert Ley proved captors wrong.

and the former commander of Einsatzgruppe D, the scourge of southern Russia. He testified with icy candor and not an iota of remorse.

How many persons were killed under your direction? asked Jackson. From June 1941 to June 1942, Ohlendorf flatly replied, "90,000 people."

Q. "Did that include men, women, and children?" A. "Yes."

Rather proudly, Ohlendorf asserted that his 500-man unit killed civilians "in a military manner by firing squads under command." Asked if he had "scruples" about these murders, he said, "Yes, of course."

Q. "And how is it they were carried out regardless of these scruples?"

A. "Because to me it is inconceivable that a subordinate leader should not carry out orders given by the leaders of the state."

The prosecution rested after three months, capped off by another movie distilling still more Nazi horror, and displays of macabre human-skin lampshades and shrunken Jewish heads submitted as evidence.

German defense lawyers then spent five months trying to cope with major handicaps. Most had grown to abhor their clients. All were unfamiliar with adversarial cross-examinations used in the United States and Britain, to say nothing of key documents that the Americans tended to withhold before springing them in court.

They managed to outflank the court's ban on tu quoque evidence (meaning, "If I am guilty, you are, too")—a stricture aimed at keeping Allied excesses, notably the mass bombing of German cities, out of the trial. In the dock was Adm. Karl Dönitz, accused of ordering U-boats to sink merchantmen without warning and let the crews drown whenever a rescue attempt might jeopardize the Germans. Dönitz never denied the charge. Instead, his lawyer produced an affidavit from Adm. Chester Nimitz, commander of the wartime U.S. Pacific fleet, stating that American submariners had followed the same policy against Japanese

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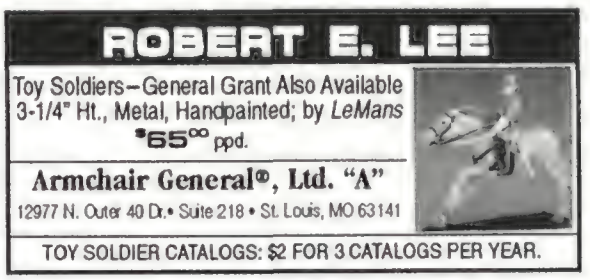
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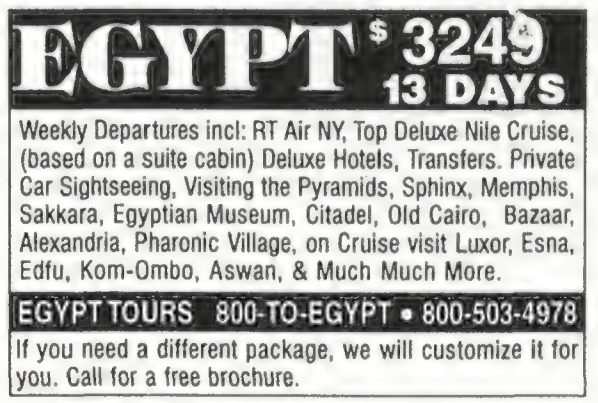
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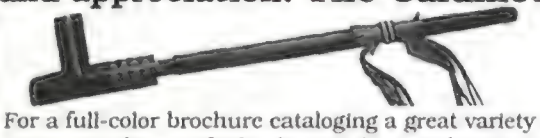

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ships. (In the end, he was sentenced to ten years; upon release in 1956, he lived 24 more years, to age 88.)

The prosecution had depicted a vast conspiracy to wage war and commit atrocities. But in choosing representative Nazis as defendants, it wound up with 21 men who, though all pleaded ignorance or powerlessness, were otherwise so different that many hated one another. Each tried to save himself by accusing others. As a result, the defense naturally failed to muster a united front, and the prosecution's conspiracy theory steadily unraveled.

The trial's highlight was the star turn of its one wholly unabashed defendant, Hermann Göring. In three days of direct examination, Göring sailed through an insider's history of Nazism, defending Germany's right to rearm and reoccupy territory lost by the Versailles treaty. He laughed off the notion that his fellow defendants were ever close enough to Hitler to be called conspirators. "At best," he said, "only the Führer and I could have conspired."

Jackson's cross-examination was a disaster. Göring understood English well; while questions were translated into German, he had time to improvise his answers. At one point, Jackson prodded Göring to admit that the Nazis' plan to occupy the Rhineland, enacted without warning in 1936, was a Nazi secret, hidden from other countries. Göring smoothly answered, "I do not believe I can recall reading beforehand the publication of the mobilization preparations of the United States."

Jackson conducted a bizarre cross-examination of Albert Speer, Hitler's personal architect of gigantic edifices and stage manager of the Nuremberg rallies. Smart, suave, handsome, not yet 40, the wellborn Speer ranked high among Hitler's few confidants and was chief of all Nazi war production for the regime's last three years. He oversaw 14 million workers; he could hardly claim ignorance of their condition or how they were recruited. In the spring of 1944, for example, he ordered 100,000 Jewish slave workers from

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On the witness stand, Speer said he had become totally disillusioned with Hitler when the Führer responded to Germany's inevitable defeat by ordering a nationwide scorched-earth policy: the total destruction of everything in the path of the Allied armies. Rejecting Hitler's monomania, which he called a betrayal of ordinary Germans, Speer told the court, "It is my unquestionable duty to assume my share of responsibility for the disaster of the German people." And he revealed—offering no proof—that in February 1945 he had set out to assassinate Hitler by dropping poison gas through an air shaft in the Führer's bunker, only to find the shaft sealed off.

Speer, the most attractive defendant at Nuremberg, had been debriefed by interrogators avid for his special knowledge of how German war factories managed to keep humming despite immense Allied bombing. Some saw him as just the kind of man needed to rehabilitate postwar Germany. Under cross-examination, he got mostly easy questions, typically prefaced by Jackson's disclaimer, "I am not attempting to say that you were personally responsible for these conditions."

That Speer actually received a 20-year sentence seems remarkable, given his adroit performance. That his equally (or perhaps less) culpable colleague, Fritz Sauckel—brutal, low-born, ill spoken—was sentenced to death, seems as legally unfair as it was morally deserved.

After Robert Jackson's powerful summation of the trial's "mad and melancholy record," the case went to the trial judges, from whom no appeal was permitted. The great unspoken issue at Nuremberg was the question of collective guilt, and hindsight clarifies the extraordinary dilemma those eight judges faced 50 years ago. Collective guilt had tainted the Versailles treaty and helped ignite the Holocaust. It is the fuel of human barbarism, currently on display from Rwanda to Serbia. And though the Nuremberg judges were given every

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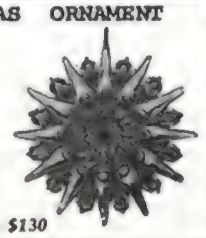

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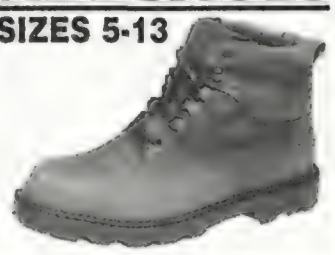

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reason to savage the Nazi tyranny, they came to believe that justice could be served only by asserting the principle of individual responsibility. Justice required, in fact, a virtual rejection of the United States' whole grand conspiracy concept.

The Nazi Party founders had been charged with conspiring for 26 years (1919-45) to launch World War II and related atrocities. All 22 defendants (including Bormann)stood accused of planning aggressive war; 18 were charged with wartime crimes and crimes against humanity, such as genocide. If the court approved, seven Nazi organizations would also be convicted, rendering all their thousands of members guilty without trial.

The problem was that conspiracy is a crime of joint participation. Conviction required proof that two or more people knowingly agreed at a specific time and place to use criminal means to achieve criminal ends. But the distinguished French judge, Donnedieu de Vabres, urged his colleagues to observe that the defendants had seemed to act less in cahoots with, than in bondage to, a megalomaniac. Jackson's documents showed the "Führer Principle" in practice—the madness of Hitler's erratic orders, executed by lackeys too blind, venal or terrified to disobey. The evidence seemingly proved chaos, not organized conspiracy.

The judges, risking a backlash from Europe's Nazi victims by sharply limiting their verdicts to the hard evidence, ruled that the war conspiracy began not in 1919 but on November 5, 1937, at the "Hossbach conference" in which Hitler's aides heard his schemes for conquering Germany's neighbors.

The conspiracy charge (Count One) was restricted to eight defendants (led by Göring) who knowingly carried out Hitler's war plans from 1938 onward. In effect, the defendants were liable only for actual wartime crimes beginning September 1, 1939—a dizzying number of crimes but one that eliminated perhaps a third of the prosecution's evidence and produced three

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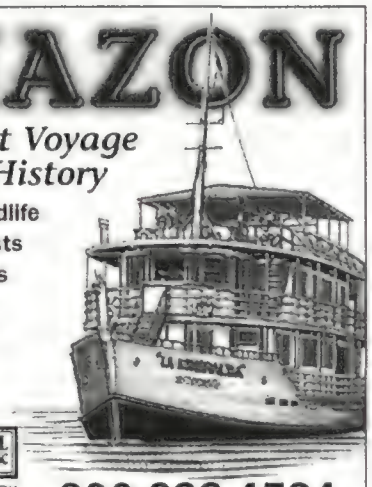
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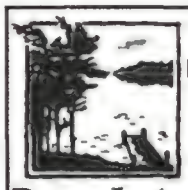
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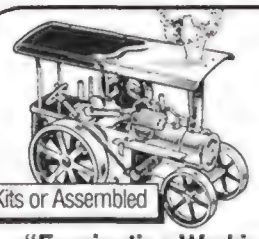
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acquittals, including that of Schacht.

Under such an approach, guilt for simply belonging to the Nazi organizations was impossible. The court held that only the SS, the Gestapo-SD and the top Nazi leadership had been proved "criminal," meaning that their members had voluntarily joined in committing war crimes after 1939. That left several million potential defendants for lower courts to handle. But since the Nuremberg judges ruled them all innocent until proven guilty, relatively few were ever tried—the prosecutorial job was too formidable.

The trial removed 11 of the most despicable Nazis from life itself. In the early morning hours of Wednesday, October 16, 1946, ten men died in the courthouse gymnasium in a botched hanging that left several strangling to death for as long as 25 minutes. Ribbentrop departed with dignity, saying, "God protect Germany." Göring had cheated the hangman 2½ hours earlier. He killed himself in his cell, using a cyanide capsule he had managed to hide until then. In one of four suicide notes, he wrote, "I would have consented anytime to be shot. But the Reichsmarschall of Germany cannot be hanged."

The Nuremberg trial never remotely enabled the world to outlaw war. By 1991, the wars of the 20th century had killed more than 107 million people. And given Nuremberg's uniqueness—winners in total control of losers—the court of 1945 may seem irrelevant to the wars of the 1990s, in which ethnic killers, such as Gen. Ratko Mladic, the Bosnian Serb implicated in the mass murder of unarmed prisoners, manage to avoid justice.

Yet the United Nations' seven "Nuremberg Principles" hold that no accused war criminal in any place or position is above the law. What the Nuremberg judges really achieved, in fact, has never been more relevant. By rejecting group guilt and mass purges, the 1945 judges defied hatred and struck a blow for peace that may yet, half a century later, help temper the madness of war.

With a guard nearby, Göring met each evening with his lawyer. In the courtroom he matched wits against the prosecution, but he would be sentenced to die.

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Book Reviews

Light Years: A Memoir
Le Anne Schreiber
Lyons & Burford, $20

"From the womb, I wanted light," writes Le Anne Schreiber in a book that is both infused with, and about, light. It is also about flora and fauna, life and death, time and territory—as well as stray cats impaled by arrows, sumacs "united in a rhizomatic conspiracy" to take over the author's acre of land, one helper whose business card reads "Landscaper La Femme," and another who "wielded his backhoe with the delicacy of a gourmand probing a lobster claw for its last sweet morsel."

Schreiber's book is a masterpiece of clarity and detail; her descriptions vivid in their straightforward simplicity, as when she describes a tale told by her Aunt Veronica. "Like all the family stories," writes Schreiber, "this one was very short, little more than bare fact whittled to a sharp point." Or, when describing the piece of land she buys in upstate New York after fleeing Manhattan in her search for light, and home, she says, "It wasn't much—just one sloping acre shaped like a blunt-tipped piece of pie being lifted from the pan—but it was unposted and all mine."

Light Years is a memoir prompted by the death of much-loved parents and her only sibling, a brother, over a period of five years. Yet, Schreiber lets the reader know of these deaths almost in passing, and though they are always in the background, there are times the reader forgets about them altogether.

The book opens with father teaching daughter the intricacies of fly-fishing, mostly by telephone and mail from Minnesota after a single visit to the author's new home and the stream that meanders near it. "Each year," she writes, "he planned a visit so we could enter the stream together, but each summer he was detained, first by my mother's illness, then by his own." In the meantime, she sends him pictures and descriptions of her favorite stretches of stream; he sends trout flies that he has crafted in his basement workshop.

On what turns out to be her last visit home, he asks if the two of them can talk "about a few things 'just in case,'" then says he would like a portion of his ashes to be cast into the stream his daughter has grown to love. Only now does the reader realize just how ill Schreiber's father is, and know for certain that her mother is already dead.

". . . I said I knew just where," she writes after describing her father's timidly put forward proposal concerning his ashes, "just in case." It's not where the sycamore spanned the stream, she explains, for "the winter after my mother died, the sycamore had been pried loose from its mooring on the bank by the force of high water released during a rare January thaw."

Soon after, we learn of her father's death: "It is spring now. . . . Rod and creel and ashes wait with me for summer, for the long light, when they will enter the stream at the riffles." Up to this point, Schreiber has been releasing the trout she catches. Now she writes, "Sometimes I wonder if the creel is his permission for me to keep what I catch. Right now, it seems more important that he taught me how to release. This summer I will carry the creel, empty, and bear the wicker weight of his absence."

Moments that touch the heart with sadness are balanced with Schreiber's humor and insight, never more apparent than in her descriptions of settling into Ancram, New York (pop. 1,533), and the lessons she learns in the process. Her first battle is with the land, much of it "an impenetrable tangle of briar, staghorn sumac, thorny blackberry bushes, and wild honeysuckle, all festooned with miles of runaway grapevine."

After a series of attacks and counterattacks—with some help from Landscaper La Femme—Schreiber wisely concludes: "I knew there was no war to be won, just an annual engagement with worthy adversaries whose tenacity I admired, even counted on, to survive my onslaughts. I had intended a limited, one-time intervention, as if paths and a glade could be carved out of a jungle once and for all, as if my acre, like the house it hosted, would sit tight for interior decoration. As if I were the character, and the acre merely a setting, not a protagonist with purposes of its own."

Schreiber's humor is at its peak in describing the stray cat she adopted even though she "was not, as they say, a cat person." Her first impression of the animal, she writes, was that "he was large, dirty, smelly, carnivorous and, to judge by his entrance, pushy." When she petted him, her palm "returned black and smelling like an NBA locker room." (Before fleeing to the country, Schreiber was the first female editor of the *New York Times* sports section.)

A series of adventures and misadventures between author and cat, clearly allegorical, all described with humor and insight, follow—including the arrow shot through the feline "shoulder to shoulder" during one of his roamings. Ultimately, as with the land, Schreiber and the cat, named Sebastian—in homage to the martyred saint who suffered at the hands of arrow-wielding pagans—reach an understanding.

It's at moments like these, when one is lulled by a Sebastian who spends much of his time curled up on the sofa, "going outdoors only for brief inspection tours of the nearest reaches of his territory," that Schreiber chooses to hit the reader with the fact that this is, after all, a memoir. "My brother died in October," she writes, shifting abruptly from the sleeping feline, "five years to the day after our mother's death, three years to the month after our father's. I am stripped clean of family."

But Sebastian isn't through with his lessons for Schreiber, and not long after, she writes of the stray, "It seems we are wed to this repetition, each the other's link to this cycle of loss and recovery. In these years, I have come to rely upon his capacity for survival, his power to transform my fear of ending into an anticipation of spring."

Schreiber is also perceptive enough to know that Sebastian now plays a unique role in Ancram "where 'newcomers' remain newcomers for two generations, at which point they achieve the status of 'relative newcomers.'" She was first known as "the lady who bought Mary Jane's house," and since Mary Jane had preceded Schreiber in town by 94 years, the author sensed an "unavoidable undertone to the phrase, as if

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it were a euphemism for 'dispossessor.'" However, once the arrow affair put Sebastian on the front page of the local paper, Schreiber became "the lady with the cat with the arrow."

Part one of the memoir ends with the author's moving description of casting her father's ashes into the water. "I felt a deep sadness that brought tears to my eyes, which added their slight flow to the stream that was carrying my father's ashes to places perhaps more distant than I can imagine. But I also felt a powerful wave of relief rising and cresting with me. I had fulfilled my promise, and my reward was a sudden explosion within me of all the love that was contained in its making."

It is not until part two of the book that we learn of Le Anne Schreiber's childhood. Born in 1945, two days before "the Enola Gay made history," she lived with her parents and older brother in a tiny apartment on the third floor of a house at 1010 Main Street in Evanston, Illinois. "I loved the mnemonic tom-tom beat of that perfect address," she writes, "so much easier to commit to memory than the nonsense clauses of the Nicene Creed which was our first task of learning . . . at St. Nicholas Grammar School."

The address was all she liked. "Like most families," Schreiber says, "we bided our time while the war machine changed gears. The apartment was our holding bin. Every night for six years, I was stored away in that hand-me-down crib, its barred sides only inches from the windowless walls of the dressing closet that served as my bedroom."

She describes vividly the day she and her mother walked to the almost-finished house the family had saved enough money to buy on Cleveland Street in one of the myriad postwar suburbs springing up across the United States. "I saw my mother pulse and glow with the pleasure of imminent escape. Even her stride was different, longer and faster and hard to keep up with." They had brought with them a big bottle of Windex. "As I sprayed and she wiped each of the thirty-five small panes of the grand whole that was the picture window, it felt as if we were pulling the blind forever on those dark forties and snapping it wide open on the light-filled fifties."

But Schreiber quickly discovered that "the picture window let in light, but the light did not reach the nooks and crannies of the imagination." The lessons she learned in the family's new "ranch house" (until she saw the house, she envisioned "a sprawling outpost of bunk-beds and hitching posts, with a triangle my mother would ring to call us in from the corral to dinner") would influence her many years later.

As she began remodeling "Mary Jane's house" in Ancram, she recalls, "I was guided . . . by an unconscious formed in the darkness of 1010 Main and reformed in the inescapable brightness of Cleveland Street. . . . The goal I set myself was providing each room with plentiful natural light without opening up the space so much that it ran wild through the house." One room, small and dim, she converted into a closet. "Only years later," she writes, "did I realize that this turnabout was my best revenge upon 1010 Main."

The year she bought her house her mother was ill and she worked with a sense of urgency, aware that "my sudden desire to create a home was linked by more than circumstance to the sudden likelihood of my mother's death." She was also discovering that home did not mean structure. "I was aware that whenever I left New York to join my parents, I said I was flying 'home,' and that whenever I returned to New York, I also said I was flying 'home.'" And later, "As long as my parents lived, home could be a shifting site. In a world minus them, I would need to fix myself in place."

It is in Ancram that Schreiber has "fixed herself," at least for now. The "lady who bought Mary Jane's house" has become "the lady who lives in the gray house with the big yellow cat, who fishes and writes about it." When a phrase gets too long, says Schreiber, "you get a name, and you hope it is one you would want to answer to. After ten years my name has spread a little ways through town, but not far."

It is here, in her fixed place, that Schreiber ultimately feels "the full impact of what I had become—the lone survivor of a natural disaster wandering in the wasteland of my family's destruction." It is here, too, where nothing in her environment goes unseen, unexamined or unappreciated, that she finds her comfort and survival: in swimming, in dreams, in memories, in friendship, in the study of Einstein's theory of space-time, in nature—and in light.

Emily d'Aulaire writes from her home in Redding, Connecticut.

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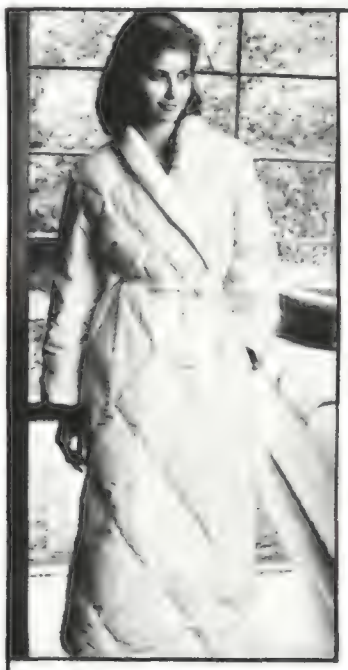

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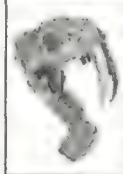

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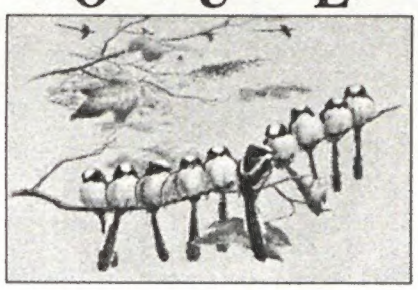

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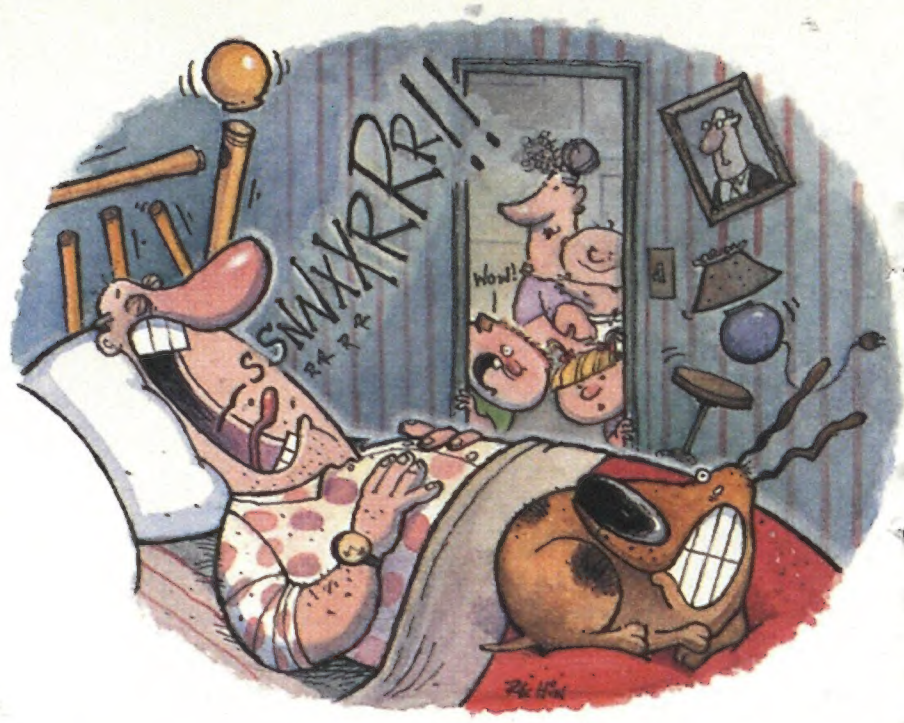
By Robb White

In my family, snoring has pretty much always been a spectator sport



Along about the time football players began putting those little pieces of tape on their noses, I busted mine. I was out logging one afternoon when a rotten limb fell off a tree and hit me so hard that I knew right away it was an emergency room situation.

Not long after the doctor fixed me up, I awoke from my customary afternoon nap to find my wife and baby granddaughter staring at me with amazement. "You don't snore anymore," my wife said. "We have been standing here for ten minutes waiting for you to snore and you never once did." The physician had not only repaired my nose, it turned out; he had eliminated my snoring, as well.

I had mixed feelings about that. Napping and snoring go way back in my family, as does the tradition of bringing babies into the napping area to marvel at the racket. One of my earliest memories is of my mother carrying me in her arms to stand in the doorway of my grandfather's office, where he was napping on the sofa, so that I would know where all that noise was coming from.

I was impressed, but it was nothing new to me. Momma herself could shake the dirt dauber nests out from under the eaves of the house. She generated such a commotion that sometimes she even woke herself up. She would give out with an extra-loud snort, sit bolt upright in bed and irritatedly demand information from any bystanders.

I realize, of course, that we Whites do not have a monopoly on snoring. Sleep specialists at the Harvard Medical School report that one out of every four adults snores regularly and nearly half of us snore occasionally. Most people, unlike my relatives, are intolerant of snoring, and their contempt drives many of the afflicted to seek out cures. Over the years, hundreds of gimmicks and gadgets have been advertised.

One device enables you to attach a little machine to your teeth; the vibrations from snoring activate a mechanism that gags you and wakes you up. Some snorers have a tennis ball sewn into their pajama shirt to discourage them from sleeping on their backs. Others use an extra pillow or prop up the head of their bed a few inches, a ploy that helps keep the air passage clear.

Then there are those little pieces of tape I mentioned earlier. Snorers (and football players) stick them across their noses to increase the volume of air taken in through the nose and reduce the volume taken in through the mouth.

Snorers are willing to spend money on these devices mainly to placate their sleeping partners. Apparently many non-snorers don't understand how easy it is to become accustomed to a constant environmental stimulus. I once knew an old woman who got habituated to the shriek of a smoke detector that malfunctioned for more than a week. At first, she beat at the offending instrument with a broom handle but was unable to knock it down. (I knew this was true because, when I visited her, I could see thousands of dents on the ceiling, some remarkably far from the target.) Next she tried sleeping on the porch, but it was cold out there, so eventually she moved back inside. "What the heck," she finally decided. "It wasn't no worse than a big cricket." Or, she might have added, a loud snorer.

My mother's grandmother was legendary. She had some friends who used to come out to her house in the country for a get-together every now and then. They would have coffee, take a walk in the garden and then go into the music room to play the piano and sing. A bunch of servants fixed lunch and served it in the dining room. Afterward the ladies would retire to separate bedrooms for a nap. My great-grandmother's room was at the far opposite end of that big house from the kitchen, but the servants down there could still hear her snoring. That was their cue to go ahead and eat up what was left of the tiny sandwiches and the frenched green beans and drink the little sip of wine that was left over. The descendants of those feast-removers told me the cue was so loud that the people who were out working in the fields would stop what they were doing and comment.

But my mother's father was the champion. As soon as he got through with his lunch, he would wander off looking for a good place to lie down. Sometimes he would go out in the yard and find, according to the season, a sunny spot on the grass or some shade under a bush. He would lie flat on his back and fall asleep. Pretty soon the caterpillars would be shaken from the leaves they were eating. The earthworms would come up to get rid of the itch from the vibration of the dirt against their integuments. If it was dry, sand would sift down into the doodlebug holes, and the bugs would begin to throw it back out. We children would stand in the dappled shade and marvel at it all.

For a while after my nose job, I felt badly about being silenced. I was the only one left who had inherited the snoring trait. Then one afternoon I was awakened from my silent nap by a new noise in the bed beside mine. I lay in a waking-up daze and listened carefully. It certainly did sound familiar. Finally I decided to take a peek, and sure enough, there was my baby granddaughter taking her own after-lunch nap. I lay back down and dropped off easily for a few minutes more.

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